

# **THE IMPACT OF INSTITUTIONAL INVESTOR TYPE ON CORPORATE EARNINGS MANAGEMENT**

by

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## **Abstract**

This thesis examines the relation between institutional investor type (specifically, transient and long-term oriented institutional investors) and the discretionary earnings management strategies of their portfolio firms. By focusing on accruals management, it extends current understanding of the relation between institutional investor type and earnings management beyond (a) earnings management through real investment decisions and (b) only firms with research and development activities (Bushee, 1998). The association between transient (long-term oriented) institutional investors and portfolio firms' accruals management is first examined without reference to portfolio firms' specific earnings targets. Then, the association is investigated conditional upon portfolio firms' non-discretionary earnings relative to earnings targets.

Transient institutional investors' investments in portfolio firms are transitory and fluctuate over a short period of time (Bushee, 1998; Porter, 1992). These investors create incentives for portfolio firm managers to adopt aggressive earnings management strategies to avoid earnings disappointment, or to take a bath when earnings disappointment is unavoidable. In contrast, long-term oriented institutional investors invest for the long-term prospects of their portfolio firms rather than focus on the current earnings performance of portfolio firms (Bushee, 1998; Shleifer and Vishny, 1997). They actively participate in monitoring their portfolio firms and their presence is argued to constrain and limit portfolio firm managers' earnings management discretion (Rajgopal and Venkatachalam, 1998; Shleifer and Vishny, 1997).

Using a sample of US institutional investors and US portfolio firms, the results support the arguments that transient institutional ownership is associated with both larger income increasing and larger income decreasing discretionary accruals. This is consistent with transient institutional ownership encouragement of managerial myopia (Bushee, 1998). However, evidence supporting the managerial myopic effects of transient institutional investors is stronger when total institutional ownership is predominantly transient. There is insufficient evidence to suggest that transient institutional investors encourage “big bath” strategies, and only very limited evidence of an association between transient institutional ownership and portfolio firms’ income smoothing strategies.

Consistent with long-term oriented institutional investors constraining portfolio firm managers’ accruals discretion, long-term oriented institutional ownership is found to be associated with smaller income increasing and smaller income decreasing discretionary accruals. The constraining effects of long-term oriented institutional investors remain evident among portfolio firms that have exercised their accrual discretion to meet their earnings targets. For firms that fail to meet their earnings targets, long-term oriented institutional ownership is negatively associated with discretionary accruals. That is, inconsistent with their long-term orientation, long-term oriented institutional investors appear to encourage “reverse” myopic accrual management behaviour among portfolio firms. There is no evidence supporting arguments that long-term oriented institutional investors create incentives for portfolio firms to adopt income smoothing strategies.

These results highlight the importance of examining different types of institutional ownership separately when investigating the effects of institutional ownership on



firms' earnings management. The study also provides evidence indicating alternative effects of institutional ownership types on firms' discretionary accruals, conditional upon the position of firms' non-discretionary earnings relative to their earnings targets. The overall results provide evidence indicating the complexities of institutional ownership type effects on portfolio firms' accrual management strategies. The insights provided in this thesis are valuable to academic researchers, analysts, investors and regulators who seek an understanding of the influences and implications of institutional investor type on corporate financial reporting.

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# 1 Introduction

## 1.1 Introduction and purpose of the study

The global increase in equity capital holdings by institutional investors over the past decades has drawn much interest to the role institutional investors can or should play in the corporate governance of their portfolio firms (see e.g., Black, 1992, 1998; Bushee, 1997, 1998; Lang and McNichols, 1997; Prentice and Holland, 1993; Shleifer and Vishny, 1997; Stapledon, 1996a, 1996b; Stein, 1989; Wahal and McConnell, 1997; among others).<sup>1</sup> In this study, institutional investors are defined to be large investors, other than natural persons, who exercise discretion over the investments of others (Lang and McNichols, 1997). More specifically, institutional investors are those subject to the Securities and Exchange Act Section 13(f) of 1934 reporting requirements.<sup>2</sup> Many critics, such as Bhidé (1993) and Porter (1992), allege that frequent trading and fragmented ownership by institutional investors discourage such investors from becoming actively involved in the corporate governance of their portfolio firms. Similarly, Black (1998) disputes the claims that there is an increasing trend in institutional activism in the US that has brought about improvements in the shareholder wealth of the portfolio firms (see e.g., Opler and Sokobin, 1995; Smith, 1996). On the other hand, recent studies provide evidence suggesting that institutional investors are playing an active role in monitoring and disciplining managerial discretion as well as improving capital market information efficiency (see e.g., Bange and De Bondt, 1998; Bushee, 1998; Cheng and Reitenga,

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<sup>1</sup> This study uses the terms “institutional investor”, “institutional owner” and “institution” synonymously. Also, the terms “portfolio firms” and “investee firms” are used interchangeably in this study.

<sup>2</sup> Institutions with greater than \$100 million of securities under discretionary management are subjected to the Securities and Exchange Act Section 13(f) of 1934 reporting requirements.

2000; Rajgopal and Venkatachalam, 1998; El-Gazzar, 1998; Majumdar and Nagarajan, 1997).

Several recent studies examine the relation between institutional ownership and portfolio firms' earnings management (e.g., Bange and De Bondt, 1998; Bushee, 1998; Cheng and Reitenga, 2000; Rajgopal and Venkatachalam, 1998; Majumdar and Nagarajan, 1997). However, most of these studies do not explicitly investigate the differential effects of institutional investor *type* on the earnings management strategies of portfolio firms. Extending this line of investigation, this study examines the differential effects of US institutional investor *types* on US portfolio firms' earnings management strategies.<sup>3</sup> The two types of institutional investors examined are transient and long-term oriented institutional investors. Transient institutional investors are institutional investors with short investment horizons (e.g., quarterly) while long-term oriented institutional investors adopt a long investment horizon, generally extending over many years.

This study addresses the general research question of how and in what manner different types of institutional investors are associated with their portfolio firm's earnings management.

This study focuses on institutional investors instead of non-institutional investors for the following reasons. First, the growth in institutional activism since the late 1980s presents an opportunity to examine whether the growth in concentrated ownership among institutional investors helps to mitigate the agency conflicts arising out of the

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<sup>3</sup> This study is conducted in the US environment because the extensive US requirements to disclose institutional holdings enable classification of institutional investor into transient and long-term oriented institutional investors. Furthermore, the US setting enables comparisons and extension of other US studies of the relations between institutional investors and earnings management.

separation of ownership and control in corporations (Berle and Means, 1968). Second, a growing number of studies of institutional investors' behaviour and their impact on portfolio firms' corporate governance, real investment decisions and stock prices, among others, enable more coherent theories to be developed to predict the associations between institutional ownership types and portfolio firms' earnings management (see e.g., Shleifer and Vishny, 1986, 1997; Del Guercio and Hawkins, 1999; Bange and De Bondt, 1998; Bushee, 1998, 2001; Sias, Starks and Titman, 2000).

This study empirically estimates portfolio firms' managerial earnings management through discretionary accruals (Jones, 1991; Dechow, Sloan and Sweeney, 1995). Accruals encompass most accounting techniques available to managers. They capture the effects of both transparent and non-transparent earnings management. Furthermore, accounting accruals represent a relatively low cost and less transparent earnings management tool as compared to other techniques such as accounting policy choice or R&D investment decisions (e.g., Bange and De Bondt, 1998; Bushee, 1998; Majumdar and Nagarajan, 1997).<sup>4</sup> If the presence of institutional investors exerts sufficient pressure on managers to manage reported earnings, then managers are likely to adopt earnings management strategies that are subtle and unlikely to be unravelled by most financial statement users.

The associations between the two institutional ownership types and accruals management are examined in multiple contexts. First, they are examined separately

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<sup>4</sup> Accruals are less costly to manage relative to R&D spending in the following manner. First, accruals management, in general, does not involve actual change in spending patterns as in the case of using R&D investment as an earnings management tool. Second, the repercussion of changing R&D spending for earnings management purposes rather than for strategic moves can potentially affect the firm's competitiveness and thus its long-term viability.

for portfolio firms with income increasing or income decreasing discretionary accruals. Associations between institutional ownership type and accruals management are then examined, conditional upon the portfolio firms' earnings targets. Examining portfolio firm managers' earnings management depending upon whether portfolio firms' pre-managed earnings exceed their earnings targets allows tests for the different incentives created by the two types of institutional investors where these incentives are most likely to be present. As such, accruals management to achieve different objectives can be investigated (e.g., aggressive, "big bath", income smoothing, etc.).

## ***1.2 Motivation***

Several factors motivate this study. First, the global surge in institutional shareholdings in the past decades has aroused much interest amongst regulators, academics and the business community in the corporate governance role institutions can and should play. On the one hand, many critics have long alleged that the presence of institutional investors encourages myopic managerial behaviour because of their fragmented and transient ownership and frequent trading (i.e., short investment horizon), among other reasons (see e.g., Bhidé, 1993; Froot, Perold and Stein, 1992; Porter, 1992). On the other hand, recent empirical results challenge this 'accepted' economic short-termism view of the role of institutional investors. In a variety of settings, institutional investors have been found to improve information efficiency in the capital market (El-Gazzar, 1998; Eames, 1998); to encourage a long-term strategy of research and development investment in firms (Bushee, 1998;

Majumdar and Nagarajan, 1997; Wahal and McConnell, 1997); to constrain managers from engaging in accruals manipulation (Cheng and Reitenga, 2000; Jiambalvo, Rajgopal and Venkatachalam, 1999); and to discourage adoption of income-increasing discretionary accruals (Cheng and Reitenga, 2000; Rajgopal and Venkatachalam, 1998). Therefore, the manner in which institutional shareholders influence managerial discretionary earnings management behaviour is an empirical issue that warrants further investigation.

Following the growth in institutional activism in the US since the late 1980s, many studies have investigated the effects of institutional activism on portfolio firms' performance (see Black (1998) and Karpoff (1998) for reviews of this branch of research). In general, both Black (1998) and Karpoff (1998) cast doubt on the effectiveness of institutional activism in bringing about improvement in target portfolio firms' future performance. However, as Karpoff (1998, Table 2) indicates, more than half of the studies reviewed used some accounting measures of performance and/or share price performance measures as evidence of institutional activism success. It follows that, if institutional ownership affects portfolio firms' earnings management strategies, then accounting measures of performance and possibly share price performance measures are less likely to be accurate indicators of the success of institutional activism.

This study diverges from the branch of research investigating the effects of institutional activism on portfolio firm performance and which implicitly assumes that the effects of institutional investors' monitoring only manifest in the form of target firms' performance. That literature ignores other potential effects that institutional monitoring can have on target firms, including effects on target firms'

performance measurements, such as accounting-based performance measures. By investigating the effects of institutional ownership on portfolio firms' financial reporting behaviour, this study provides a better understanding of (a) the effects of institutional ownership on accounting numbers; and, possibly more importantly, (b) the appropriateness of using "unadjusted" accounting-based performance measures to proxy for target portfolio firms' economic performance.

In an attempt to reconcile the differential views of earnings management between accounting academics, practitioners and regulators, Dechow and Skinner (2000) conclude that "understanding management's incentives is key to understanding the desire to engage in earnings management" (p.248). Dechow and Skinner (2000) encourage academics' research efforts to focus more on capital market incentives for earnings management given the sensitivity of managers' compensation and human capital to the level of their firms' stock prices, and stock price relations to key accounting numbers such as earnings. Consistent with their call, this study attempts to draw from both the traditional contracting incentives and capital market incentives in investigating the relation between institutional ownership type and earnings management.

Bushee (1998) examines the relation between institutional ownership types and portfolio firms' earnings management. That study investigates a real investment choice (*viz.*, whether to cut R&D expenditures or not) as the tool for earnings management. Extending Bushee's (1998) study, this study investigates the relation between institutional ownership types and portfolio firms' earnings management using accruals as the earnings management vehicle. Accruals management represents a less costly and subtler tool to manage reported earnings. One reason for

its lower cost is that accruals management does not directly affect the business operations of the firms involved. Furthermore, given the accrual accounting system, accruals management is not restricted to firms with R&D activities (such as Bushee's (1998) sample). Therefore, this study extends Bushee's (1998) investigation to a larger sample of firms and tests the external validity of his findings.

A further motivation for this study emerges from two other studies that examine the relation between institutional ownership and portfolio firms' accruals management (Rajgopal and Venkatachalam, 1998; Cheng and Reitenga, 2000).<sup>5</sup> Although both studies based their theoretical frameworks on arguments concerning differences between transient and long-term oriented institutional investors, neither study explicitly models the different types of institutional ownership consistent with their theoretical frameworks. As a result, the strength of their conclusions is significantly weakened. In contrast, this study classifies institutional ownership types into transient and long-term oriented categories using the classification technique developed by Bushee (2001),<sup>6</sup> which is consistent with the theoretical framework of the study. It is, therefore, able to test the relations between institutional ownership type and accruals management with greater internal validity. Accordingly, it is able to provide more direct evidence on the association between ownership by different types of institutional investors and portfolio firms' accruals management.

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<sup>5</sup> Another paper by Jiambalvo, Rajgopal and Venkatachalam (1999) represent a shorter version of the same paper by Rajgopal and Venkatachalam (1998).

<sup>6</sup> The classification scheme in Bushee (2001) represents an improvement to the scheme he developed in Bushee (1998). Brian Bushee's advice on his classification scheme is gratefully acknowledged.

### **1.3 Predictions**

Figure 1.1 presents a summary of the hypotheses developed in relation to transient institutional investors, and Figure 1.2 presents a summary of the hypotheses relating specifically to long-term oriented institutional investors.

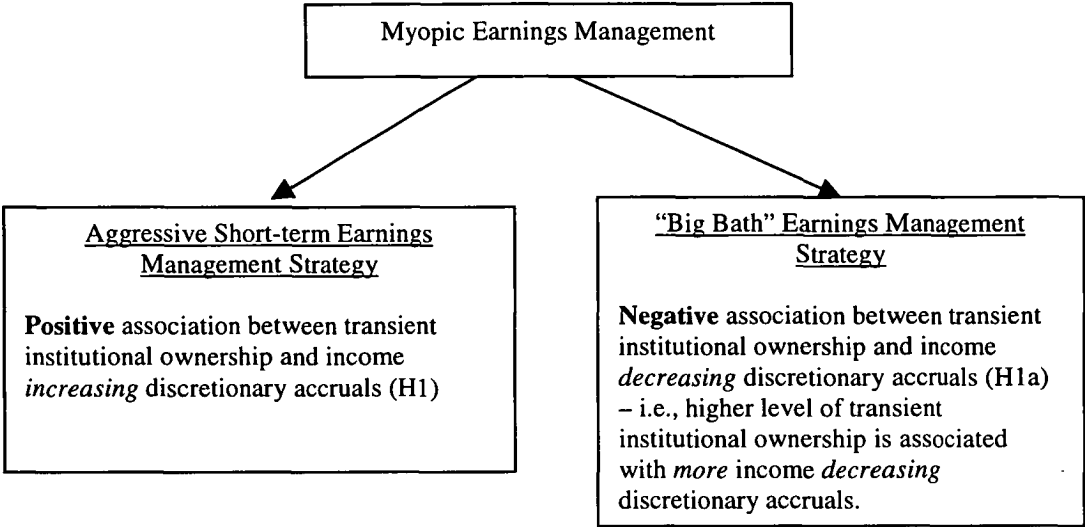
This study first tests the relations between institutional ownership types and income increasing (decreasing) discretionary accruals. Transient institutional investors are argued to create incentives for portfolio firm managers to manage accruals to achieve short-term objectives. When portfolio firms have positive (negative) discretionary accruals, transient institutional ownership is expected to associate with larger income increasing (decreasing) discretionary accruals (H1 and H1a, see Figure 1.1 Panel A). Long-term oriented institutional investors, however, through their monitoring activities constrain their portfolio firm managers' discretionary accruals. Therefore, long-term oriented institutional ownership is expected to associate with less positive (income increasing) and less negative (income decreasing) discretionary accruals (H2 and H2a, see Panel A of Figure 1.2).

For portfolio firms that have the greatest incentives to manage earnings upward (that is, portfolio firms that meet or beat earnings targets only after accruals management, "reversible decline" firms), the positive association between transient institutional ownership and discretionary accruals is expected to be more prevalent (H3, see Panel B of Figure 1.1). On the other hand, if long-term oriented institutional investors are effective in constraining portfolio firm managers' discretion, then a negative association between long-term oriented institutional ownership and discretionary accruals is expected for "reversible decline" firms (H4, see Figure 1.2 Panel B).

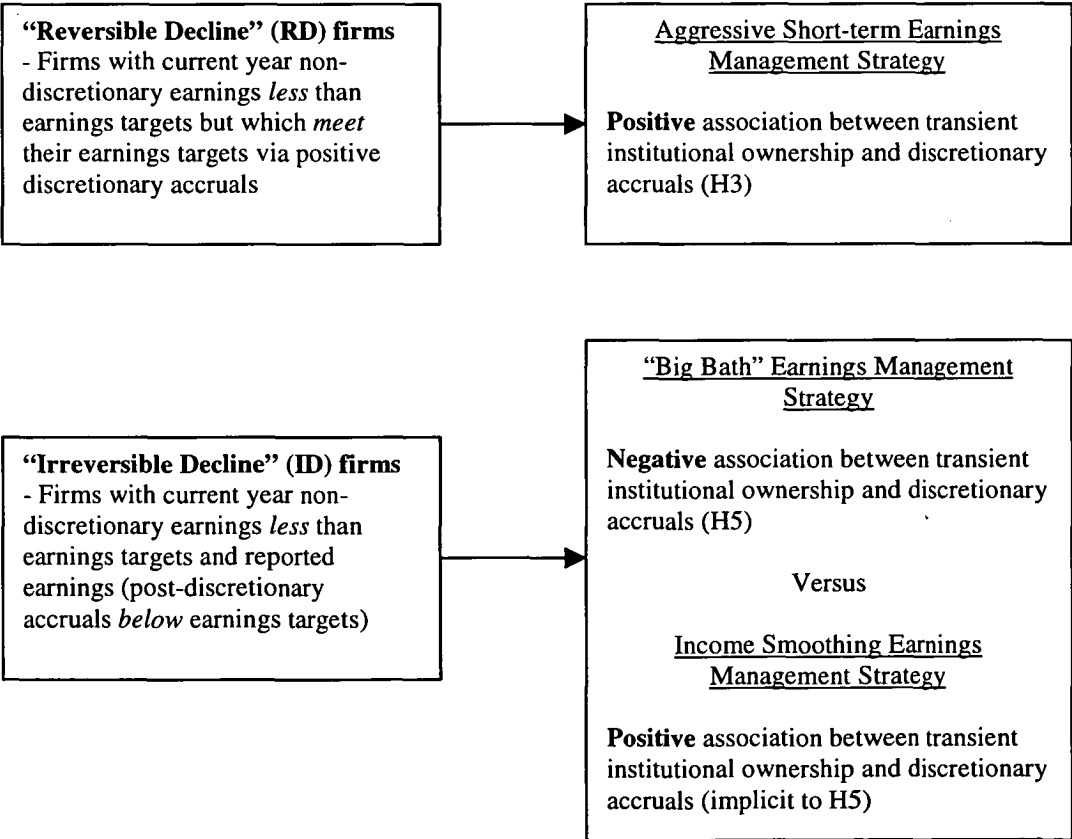


**Figure 1.1: Summary of Hypotheses Relating to Transient Institutional Investors**

**Panel A: General Effects of Transient Institutional Investors on Discretionary Accruals (Chapter 2)**

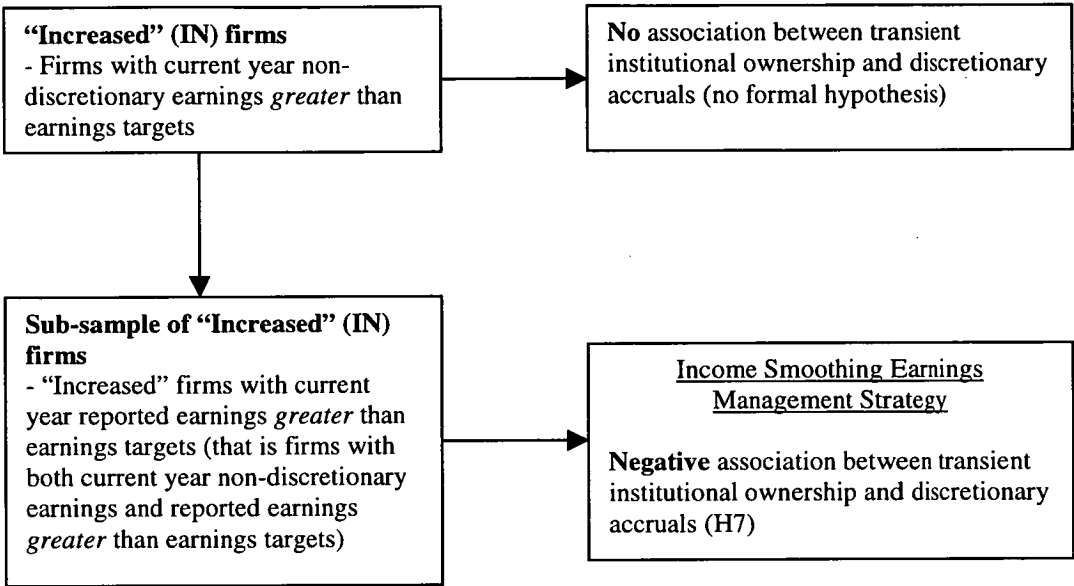


**Panel B: Specific Effects of Transient Institutional Investors on Discretionary Accruals (Chapter 3)**



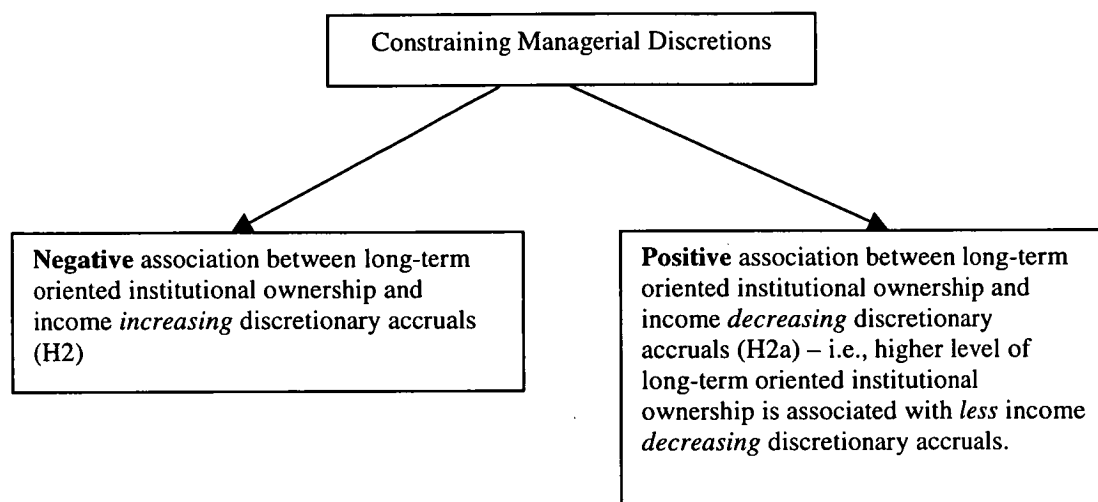
**Figure 1.1: Summary of Hypotheses Relating to Transient Institutional Investors (Continued)**

**Panel B: Specific Effects of Transient Institutional Investors on Discretionary Accruals (Chapter 3) - Continued**

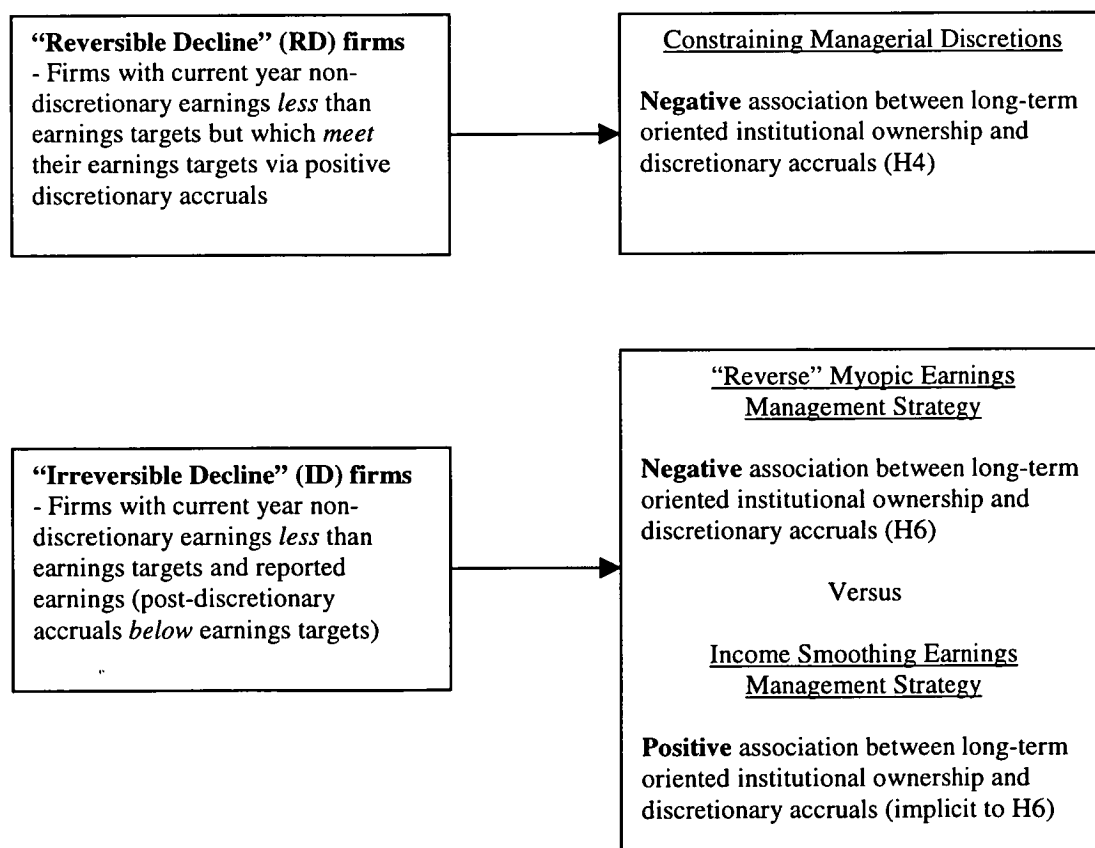


**Figure 1.2: Summary of Hypotheses Relating to Long-term Oriented Institutional Investors**

**Panel A: General Effects of Long-term Oriented Institutional Investors on Discretionary Accruals (Chapter 2)**

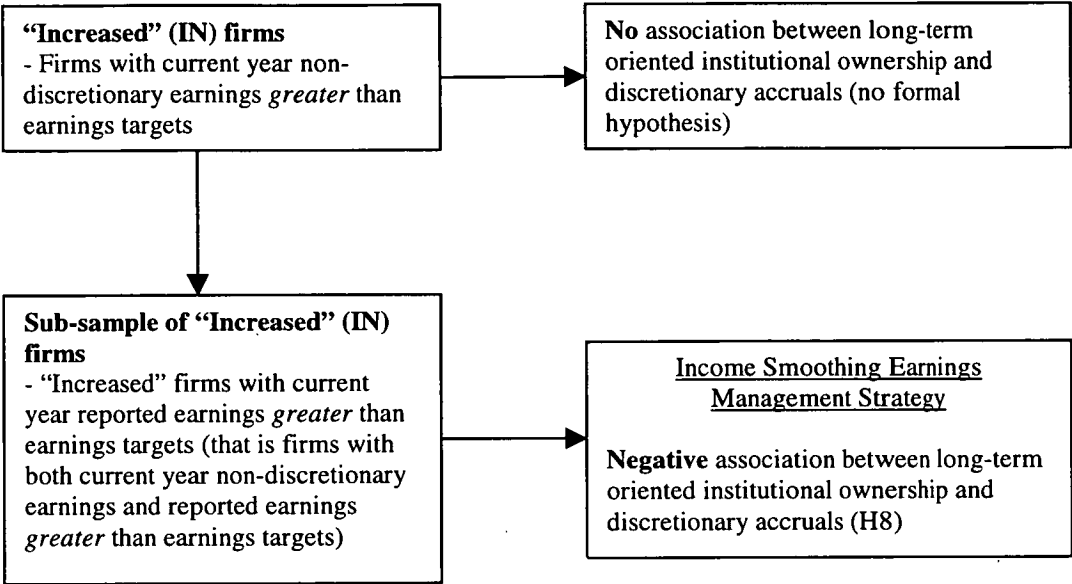


**Panel B: Specific Effects of Long-term Oriented Institutional Investors on Discretionary Accruals (Chapter 3)**



**Figure 1.2: Summary of Hypotheses Relating to Long-term Oriented Institutional Investors (Continued)**

**Panel B: Specific Effects of Long-term Oriented Institutional Investors on Discretionary Accruals (Chapter 3) - Continued**



For portfolio firms that fail to meet their earnings targets after accruals management (“irreversible decline” firms), transient institutional investors are predicted to provide portfolio firm managers with incentives to take a “bath” to create accounting slack for future periods. Thus, a negative relation between transient institutional ownership and discretionary accruals is expected for these firms (H5, see Figure 1.1 Panel B). Competing against this prediction is the income smoothing hypothesis, which predicts that portfolio firm managers have incentives to get as close to the earnings targets as possible even if firms are certain to fall short of the targets. Income smoothing arguments would imply a positive relation between transient institutional ownership and discretionary accruals.

There is no existing literature on the relation between long-term oriented institutional investors and the accruals management of “irreversible decline” firms. However, Rajgopal and Venkatachalam (1998) provide some empirical evidence consistent with “reverse” myopic behaviour when they examine the relation between institutional ownership, *as a whole*, and income decreasing accruals. “Reverse” myopia can be regarded as a type of conservatism bias.<sup>7</sup> If such apparent “reverse” myopic behaviour is associated with long-term oriented institutional investors, then a negative relation between long-term oriented institutional ownership and the discretionary accruals of “irreversible decline” firms is expected (H6, see Panel B of Figure 1.2). Once again, the income smoothing hypothesis competes with the “reverse” myopia hypothesis, where the former would predict a positive relation between long-term oriented institutional ownership and the discretionary accruals of “irreversible decline” firms.

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<sup>7</sup> “Reverse” myopic behaviour in this study refers to conservative accrual management, where the latter is the adoption of less income increasing or more income decreasing discretionary accruals strategy than otherwise. This is consistent with the conservatism concept stipulated by Statement of Financial Accounting Concepts (SFAC) No.2 (FASB, 1980) and Basu (1997).

In general, neither type of institutional investor is predicted to be associated with discretionary accruals of portfolio firms that already meet their earnings targets prior to managing accruals (“increased” firms). However, for “increased” firms that also report earnings above targets, a closer examination of the income smoothing hypothesis is possible. Given that incentives for meeting earnings targets no longer exist for these firms, evidence of a negative relation between transient (long-term oriented) institutional ownership and discretionary accruals can be less ambiguously attributed to income smoothing incentives created by institutional investors (H7 and H8, see Panels B of Figures 1.1 and 1.2).

#### ***1.4 Major findings***

Overall, the results support most of the hypothesised relations between long-term oriented institutional ownership and portfolio firms’ discretionary accruals (H2, H2a, H4 and H6). However, there is no evidence suggesting that long-term oriented institutional ownership encourages income smoothing behaviour (H8). More specifically, the results show that long-term oriented institutional ownership is negatively (positively) associated with income increasing (decreasing) discretionary accruals, consistent with the contention that long-term oriented institutional investors actively involve themselves in monitoring their portfolio firms, thus constraining portfolio firm managers’ accruals discretions. This constraining effect is also evident among portfolio firms that have the greatest incentives to manage their earnings aggressively (*viz.*, “reversible decline” firms).

In addition to the constraining effect long-term oriented institutional investors have on their portfolio firm managers, long-term oriented institutional ownership is found to encourage “reverse” myopic behaviour among portfolio firms faced with an inevitable failure to meet their earnings targets (*viz.*, “irreversible decline” firms). These findings are unlikely to be an effect of measurement error in discretionary accruals, and are robust to different measures of institutional ownership and different specifications of the relation between discretionary accruals and firm size. The relations between long-term oriented institutional ownership and discretionary accruals suggest there is a conservative bias in long-term oriented institutional investors’ constraints on portfolio firm managers’ accruals discretion.

The associations between transient institutional ownership and portfolio firms’ discretionary accruals are less conclusive. The negative relation between transient institutional ownership and income decreasing discretionary accruals is robust and consistent with transitory investment by institutional investors creating incentives for managers of portfolio firms to engage in myopic accruals management to create accounting slack for future periods. However, the hypothesised positive relation between transient institutional ownership and income increasing discretionary accruals is not evident. Similar to Bushee (1998), the association between transient institutional ownership and aggressive accruals management is more robust and consistent if transient institutional ownership dominates portfolio firms’ institutional ownership.

When the transient investor hypothesis is tested in an environment where it should be most pronounced (among “reversible decline” firms), the predicted relation is only significant at the 10% level in the main test. However, for “reversible decline”

firms with a high proportion of ownership by transient institutions, the transient investor hypothesis is supported at the 5% level. When constraints on the accounting flexibility available to portfolio firm managers are considered, no support is found for the transient investor hypothesis. Similar to Bushee (1998), overall evidence of the short-term effects of transient institutional investment is more consistent and robust when total institutional ownership is predominantly made up of transient institutional ownership. Therefore, the impact of transient institutional ownership on earnings management, in general, may not be as severe as has been criticised (e.g., Black 1998, Black and Coffee, 1994; Coffee, 1991; Levitt, 1998).

Evidence of an association between transient institutional ownership and income smoothing by portfolio firm managers is very limited. Such association is only found within a very restricted sub-sample. Finally, transient institutional ownership is not found to be associated with “big bath” behaviour although this might be alternatively explained by the inherent characteristics of the sample firms, where the sample excludes loss-making firms.

### ***1.5 Significance of the study***

This study contributes to the literature in the following areas. First, it provides an understanding and empirical evidence concerning how portfolio firms’ financial reporting behaviour is influenced by different types of institutional investors. This is important given that a large body of literature has focused on the effects of institutional activism on target firms’ accounting-based performance without investigating the effects institutional activism can have on accounting numbers (see



e.g., Black, 1998; Karpoff, 1998). The results of this study suggests that if accounting-based performance measures are to be used as indicators of institutional activism success, then “adjusted” accounting numbers should be used, otherwise the institutional activism success measure would be biased. For example, if target firms are those that engage in “reverse” myopic earnings management as a results of institutional monitoring, then the results of this study would suggests accounting-based performance measures are likely to be biased downwards, thus potentially explaining the lack of evidence supporting an improved performance in target firms when accounting-based performance measures are used (Karpoff, 1998).

Furthermore, this study highlights the importance of separating institutional ownership type when investigating the relation between institutional ownership and earnings management as transient institutional ownership influences portfolio firms’ earnings management strategies differently from long-term oriented institutional ownership (see also Bushee, 1998). The results extend the existing empirical evidence on the relation between institutional ownership and discretionary accruals. Previous studies have generally used the overall level of institutional ownership which potentially obscures the effects of different types of institutional investors on portfolio firm managers’ earnings management incentives. This study provides evidence of the differential influence that transient and long-term oriented institutional ownership has on portfolio firm managers’ accruals management strategies. Therefore, this study extends the very limited research into the relation between institutional ownership (type) and accruals management.

Another contribution of this study is that it combines the traditional contracting incentives and capital market incentives in developing the hypotheses. As a result,

the study is able to predict different portfolio firms' accruals management strategies within each type of institutional ownership, namely transient and long-term oriented institutional ownership (see Figure 1.1 and Figure 1.2), conditioned upon portfolio firms' non-discretionary earnings levels relative to earnings targets. Furthermore, income smoothing behaviour is examined among portfolio firms with incentives to smooth reported earnings in the absence of other incentives, such as to meet or beat earnings targets, and excluded portfolio firms that supposedly smoothed earnings downward to the extent that they missed their earnings targets. As such, this study is able to examine income smoothing behaviour within a "cleaner" sample, strengthening the findings of this study with respect to income smoothing behaviour.

The results also collaborate and extend the evidence presented by Bushee (1998). First, they extend Bushee's findings on the relation between transient institutional ownership and earnings management. Bushee (1998) finds that portfolio firms with predominantly transient institutional ownership are more likely to cut their R&D spending to manage earnings upward. The findings of this study indicate that a similar association is also observed when accounting accruals are used as an earnings management tool. Furthermore, when using discretionary accruals as an earnings management tool, this relation is less rigid, with the results suggesting that transient institutional ownership is associated with more aggressive accruals management. However, the association is stronger among portfolio firms with ownership predominantly comprised of transient institutional ownership, consistent with Bushee's (1998) findings. This study also extends Bushee (1998) by predicting the relation between long-term oriented institutional ownership and discretionary accruals.

Furthermore, the results of this study indicate that even though transient institutional ownership is associated with more aggressive accruals management by portfolio firms, the accruals management of portfolio firms, overall, seems to be dominated by long-term oriented institutional investors. Therefore, the alleged managerial myopia induced by transient institutional investors, while observable, may not as prevalent or severe as previously suggested (e.g., Levitt, 1998).

The finding that long-term oriented institutional ownership is associated with “reverse” myopic accruals management behaviour also highlights the asymmetric influence of long-term oriented institutional ownership on portfolio firms’ accruals management. In particular, although long-term oriented institutional ownership appears to constrain portfolio firms’ discretionary accruals in general, it appears that the constraint is biased towards conservatism. This implication opens up an interesting research avenue to investigate the potential conservative bias effects of long-term oriented institutional investors on portfolio firms’ accruals management.

## **1.6 Thesis organisation**

The remainder of the thesis is organised as follows. The next two chapters draw upon existing research to analyse the relations between different types of institutional investors and portfolio firms’ accruals management. Chapter 2 begins by exploring the institutional investor’s role in corporate governance. It then analyses and develops hypotheses predicting the *general* relations between different types of institutional investors and income increasing (decreasing) earnings management, without specific reference to earnings targets. Chapter 3 extends the

analysis in Chapter 2 by explicitly examining portfolio firm managers' earnings management incentives, conditional upon portfolio firms' pre-managed earnings levels relative to their earnings targets. Therefore, Chapter 2 provides the *general* background for an understanding of the relation between types of institutional investors and income increasing (decreasing) discretionary accruals, whereas analysis in Chapter 3 enables a more specific understanding of the potentially complex earnings management incentives created by different types of institutional investors.

The classification of institutional investors into transient and long-term oriented investors is explained and described Chapter 4, while Chapter 5 outlines the research design. Chapter 6 presents the results of the empirical tests and Chapter 7 concludes the study with a review of the thesis, a summary of its major findings and implications, a discussion of the limitations of the study, and suggestions for future research.

## 2 Institutional Investor Type and Earnings Management

### 2.1 Introduction

The associations between different types of institutional investors and portfolio firms' earnings management are analysed in Chapters 2 (this chapter) and 3.<sup>8</sup> This chapter analyses and develops hypotheses predicting the *general* associations between different types of institutional investors and income increasing (decreasing) earnings management. The hypotheses make no specific reference to portfolio firms' earnings targets. Chapter 3 then extends the analysis of this chapter by explicitly examining portfolio firm managers' earnings management incentives conditional upon their firms' earnings targets. Chapter 2 provides the *general* background for our understanding of the relation between types of institutional investors and income increasing (decreasing) discretionary accruals; whereas analysis in Chapter 3 enables a more specific understanding of the potentially complex earnings management incentives created by different types of institutional investors. Following recent developments in the literature on the relation between institutional investors and earnings management (e.g., Bushee, 1998; Cheng and Reitenga, 2000), this study assumes portfolio firms can have both transient and long-term oriented institutional investors rather than only one or the other. Furthermore, recognising that managers of portfolio firms are likely to face different incentives to manage income increasing discretionary accruals and income decreasing discretionary accruals, hypotheses regarding the effects of different types of

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<sup>8</sup> This study uses the terms "institutional investor", "institutional owner" and "institution" synonymously. More specifically, institutional investors are those subject to the Securities and Exchange Act Section 13(f) of 1934 reporting requirements. That is, all institutions with greater than \$100 million of securities under discretionary management. Also, the terms "investee firms" and "portfolio firms" are used interchangeably in this study.

institutional investors on income increasing and income decreasing discretionary accruals are examined separately.

This chapter begins by exploring the institutional investor's role in corporate governance. Hypotheses developed in Section 2.3 extend from the existing literature on the two types of institutional investors' influence on managerial earnings management incentives. In particular, Section 2.3.1 examines the influence of transient (short-term oriented) institutional investors on portfolio firms' income increasing (decreasing) earnings management whilst Section 2.3.2 investigates the effects of long-term oriented institutional investors on portfolio firms' income increasing (decreasing) earnings management.

Because their investments in portfolio firms are transitory and fluctuate according to the portfolio firms' current earnings performance, transient institutional investors create incentives for portfolio firm managers to adopt aggressive earnings management strategies to avoid earnings disappointment, and to take a bath when earnings disappointment is unavoidable. In contrast, long-term oriented institutional investors are institutional investors who invest for the long-term rather than focus on current earnings performance of portfolio firms. Therefore, long-term oriented institutional investors tend to be informed and involved investors who actively participate in monitoring their portfolio firms. Their presence constrains and limits portfolio firm managers' earnings management discretion. Section 2.4 summarises and concludes this chapter.

## 2.2 *Institutional investors and corporate governance*

Evolution of the corporate business environment means that the single owner-manager firm structure has given way to modern corporations where capital from a dispersed pool of shareholders and the operational skills of professional management teams are combined. Berle and Means (1968)<sup>9</sup> have long suggested that there is a divergence between ownership and control, with ownership being vested in the shareholders and control in the management team. Such separation of ownership and management functions enables corporations to access a much larger pool of capital than is available to other forms of business arrangement such as partnerships or sole proprietorships. Therefore, corporations can pursue ventures or projects of a larger scale to take advantage of the economies of scale. Both shareholders and managers can benefit from the corporate form of business organisation. On the one hand, shareholders can participate in the gains from the ventures without the necessary management skills; while managers can pursue profitable business opportunities without large personal wealth as starting capital.

A principal-agent relationship is created when shareholders delegate decision-making authority to managers. As the agents of shareholders, managers are charged with decision making that will enhance shareholders' wealth. Shareholders provide the capital but have only limited influence over the firm's day-to-day operations. They view firms as investment vehicles and employ managers to diligently and efficiently manage the firms with the goal of maximising equity value. In contrast, managers regard share ownership as only one facet of their relationship with the firm. Managers also view the firm as a source of salary, perquisites, self-esteem,

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<sup>9</sup> First published in 1932.

and/or recognition, and as a means of creating value for their human capital (Berle and Means, 1968). To protect and enhance these multiple sources of benefits to managers, only one of which is equity value, managers sometimes make decisions that benefit them personally at the expense of shareholders (Jensen and Meckling, 1976; Healy, 1985; Watts and Zimmerman, 1986).

The potential divergence or conflict of interest between shareholders and managers gives rise to agency costs. In the first instance, shareholders incur monitoring costs in reviewing the actions of managers.<sup>10</sup> These costs are then transferred, either in full or in part, to managers as part of *ex ante* price-protection, or *ex post* settling up for dysfunctional behaviour. Rational managers would seek to reduce the monitoring costs transferred to them. Therefore, managers incur bonding costs with the aim of assuring shareholders that the shareholders' interests are being pursued.<sup>11</sup> Managers would only incur bonding costs to the extent that bonding costs reduce the monitoring costs they bear, and would stop incurring bonding costs when the marginal cost of bonding equals the marginal reduction of the monitoring costs they bear. Inevitably, some potential for divergence of interest between shareholders and managers remains and this is referred to as residual loss.

Agency costs represent the sum of the monitoring costs, bonding costs and residual loss. Such costs can become more prevalent with the presence of diffuse outside shareholders who do not have sufficient incentives to monitor the managers. This is because if diffuse outside shareholders do not have incentives to monitor managers,

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<sup>10</sup> Examples of monitoring costs are costs of mandatory audit, costs to establish management compensation plans, budget restrictions, etc. (Jensen and Meckling, 1976).

<sup>11</sup> Examples of bonding costs include contractual guarantees to have the financial statements audited, explicit bonding against malfeasance on the part of managers and contractual limitations on the manager's decision power (Jensen and Meckling, 1976).



then there will be limited (or no) monitoring and bonding mechanism to ensure managers act in the interests of the owners. Without sufficient monitoring and bonding mechanisms in place, managers have leeway to pursue their personal interests knowing that their dysfunctional behaviours are unlikely to be punished, other than through *ex ante* price protection. Thus, although it might appear that the lack of monitoring by diffuse outside shareholders reduces monitoring and bonding costs, the residual loss (resulting from the divergence of interests between shareholders and managers) is likely to be very large and to outweigh the savings in monitoring and bonding costs. The lack of incentives to monitor managers can result from high information search costs, organisation costs and heterogeneity of interests among the outside shareholders (Watts and Zimmerman, 1986).

By investing through institutions, individual investors' resources are pooled. Also, as share ownership becomes more concentrated among smaller numbers of investors, such as institutional investors, the costs of information search and information analysis, among others, are reduced. Therefore, investing through institutional investors can mitigate the disincentives faced by diffused outside shareholders to monitor portfolio firms (Shleifer and Vishny, 1997). Furthermore, institutional investors with their greater resources and skills can often better and more effectively monitor portfolio firm managers than individual investors. This, in turn, aids in reducing the agency costs between shareholders and managers. Therefore, the involvement of institutional investors in corporate governance can have a direct bearing on the agency costs resulting from separation of ownership and control (Shleifer and Vishny, 1997).

The increase in share ownership by institutional investors across time is evident. For example, Gompers and Metrick (1998), investigating institutions governed by the SEC Section 13(f),<sup>12</sup> find that these institutions' shareholdings grew from \$375 billion in 1980 to \$3.98 trillion in 1996. Percentage-wise, these institutions held 27.6% of the total market capitalisation of the publicly traded shares in 1980 and 51.0% in 1996.<sup>13</sup> A similar trend is observed in the UK, where financial institution share ownership has increased from 22.1% of the listed UK companies in 1963 to 61.3% in 1990 (Davies, 1993).

There is a growing interest in institutional investors' roles in corporate governance.<sup>14</sup> Recent times have seen an emergence of increased institutional activism carried out by large pension funds such as the California Public Employees Retirement System (CalPERS), and the College Retirement Equities Fund (CREF), among others.<sup>15</sup> A variety of institutional investor organisations also exist, such as the Council of Institutional Investors (CII), to organise and coordinate third party monitoring activities. Despite this institutional activism, institutional investors continue to be criticised for doing too little and the demand for a more active role for institutional investors with respect to corporate governance and managerial monitoring activities is ongoing (e.g., Black, 1998; Porter, 1992).

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<sup>12</sup> Under the Securities and Exchange Act Section 13(f) of 1934, all institutions with greater than \$100 million of securities under management are required to report their share holdings to the SEC on a quarterly basis.

<sup>13</sup> After controlling for the expansion of the share market over time, these institutional holdings increased from \$365 billion (26.9% of the total market capitalisation) in 1980 to \$3.77 trillion (48.2%) in 1996 (Gompers and Metrick, 1998).

<sup>14</sup> Corporate governance deals with mechanisms by which stakeholders of a firm (specifically in this study, institutional investors) exercise control over corporate managers such that their interests are protected (John and Senbet, 1998). This definition of corporate governance excludes managers from "stakeholders" and looks at the relation between stakeholders and managers.

<sup>15</sup> See for example Del Guercio and Hawkins (1999) and survey studies by Black (1998) and Karpoff (1998). The forms of institutional activism include exercise of voting rights, routine and extraordinary actions by institutional investors. Examples of these actions are provided in later discussions.

The manner in which institutional investors can be involved in the corporate governance of their portfolio firms includes the normal exercising of voting rights, routine and extraordinary actions. Routine actions include regular one-to-one meetings with chief executive and/or finance directors of the portfolio firms, attending post-results presentations, brokers' lunches, etc. Extraordinary actions include attempting to influence the outcome of proposed large transactions requiring shareholder consent, and intervention to change the composition of the underperforming (or otherwise unacceptable) board of an investee firm.<sup>16</sup> The term "monitoring" is used in this study to include the exercising of voting rights, routine and extraordinary actions by institutional investors.<sup>17</sup> That is, institutional monitoring in this study includes both public and "behind closed doors" interventions.<sup>18</sup>

### ***2.3 Hypothesis development: influence of institutional investor type on earnings management incentives***

Financial statements can play an important role in restricting opportunistic behaviour by portfolio firm managers and in reducing agency costs. For example, managerial compensation packages often include financial performance measures such as accounting earnings as one of the determinants of managerial remuneration

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<sup>16</sup> For a detailed discussion of routine, extraordinary actions, and issues relating to the exercise of voting rights, see Stapledon (1996b) Chapter 8.

<sup>17</sup> "Intervention" and "monitoring" are used interchangeably in this study.

<sup>18</sup> "Behind closed doors" interventions include informal direct discussion with management or public announcements, and explanatory letters (e.g., voting "no" or withholding a vote with an explanatory letter to the firm's CEO and/or directors), among others.

(Murphy, 1999).<sup>19</sup> Generally accepted accounting principles provide portfolio firm managers with considerable discretion in determining the final accounting numbers such as earnings. This discretion presents opportunities for managers to choose accounting techniques to serve a particular objective, be it to opportunistically transfer wealth from the firm to themselves, or to more accurately reflect the performance and the position of the firm they are managing. Therefore, there is considerable scope for managers to incorporate their incentives, *ex post*, into the financial reporting decision making process.<sup>20</sup>

How the presence of different types of institutional ownership affects the earnings management strategies of their portfolio firms depends upon the trade-off between the expected benefits to be derived by the institutional investors from institutional monitoring and the costs of such monitoring actions, as well as the expected benefits of alternative courses of action (Pozen, 1994).<sup>21</sup> The effects of institutional ownership on portfolio firms' earnings management strategies are also affected by the portfolio firm managers' perceptions of the likelihood, extent and nature of institutional intervention to rectify or prevent dysfunctional behaviour. The manner in which institutional investors influence portfolio firm managers' financial reporting discretion is an empirical issue as it is possible to mount a case for both a passive hands-off policy (e.g., Bhide, 1993; Porter, 1992) and an active monitoring policy by

<sup>19</sup> Using a proprietary survey of bonus plan conducted in 1996, Murphy (1999) finds that 91% of his sample firms explicitly use at least one measure of accounting profit in their annual bonus plan. Furthermore, his analysis is consistent with a general bonus scheme formula detailed by Healy (1985). This formula takes the form of  $B_i = p_i \{ \min\{U_i, \max\{(E_i - L_i), 0\}\} \}$ , where  $p_i$  defines the percentage that can be allocated to a bonus pool ( $B_i$ ) with an upper limit of  $U_i$ , and an earnings target or lower bound of  $L_i$ .  $E_i$  represent a variant of reported earnings.

<sup>20</sup> Such scope in managing reported earnings according to managers' incentives remains unless contractual specifications completely and effectively constrain managers' financial reporting choices. However, this is generally not possible or feasible (Watts and Zimmerman, 1986).

<sup>21</sup> An example of an alternative course of action is for the institutional investor to offload its shareholdings in the portfolio firm instead of engaging in intervention activity.

institutional investors (e.g., Bushee, 1998; Majumdar and Nagarajan, 1997) depending on the types of institutional investor.

This thesis uses accruals manipulation as a proxy for earnings management by portfolio firm managers. Accruals manipulation represents a less costly and more subtle earnings management technique compared to the research and development (R&D) investment decision that has been widely used as a proxy for earnings management in the studies investigating the effects of institutional ownership on earnings management carried out thus far (e.g., Bushee, 1998; Majumdar and Nagarajan, 1997).<sup>22</sup> It is also more wide ranging in its incorporation of earnings management techniques than single accounting policy choice or portfolio of accounting policy choice (Fields, Lys and Vincent, 2001; Francis, 2000). Furthermore, examining accruals manipulation as a proxy for earnings management extends the current understanding of the effects of institutional investor type on earnings management beyond firms with research and development activities.

The following sections examine the relation between two institutional investor types (transient and long-term oriented) and portfolio firms' earnings management behaviour respectively. The hypotheses about the relations between institutional investors and portfolio firms' income increasing (decreasing) discretionary accruals are separately developed and discussed within each type of institutional investors (*viz.*, transient and long-term oriented) to capture the differential effects each institutional investor type has on portfolio firms' discretionary accruals.<sup>23</sup> In

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<sup>22</sup> See Chapter 5 for further discussions of the relative merits of discretionary accruals *versus* R&D investment decision as proxies for earnings management.

<sup>23</sup> A hypothesised relation between *transient* institutional ownership and portfolio firms' discretionary accruals does not necessarily imply an opposite relation between *long-term oriented* institutional ownership and portfolio firms' discretionary accruals is true. This is due to the existence of non-institutional investors.

particular, Section 2.3.1 develops hypotheses about the relation between transient institutional investors and income increasing (decreasing) discretionary accruals, whilst Section 2.3.2 develops hypotheses about the relation between long-term oriented institutional investors and income increasing (decreasing) discretionary accruals.

### **2.3.1 Short-term oriented (transient) institutional investors' impact on earnings management**

This sub-section develops the hypotheses in relation to the impact of short-term oriented institutional investors on portfolio firm managers earnings management decisions. It begins by examining the reasons for the lack of incentives for short-term oriented institutional investors to be involved in portfolio firms' corporate governance matters (Section 2.3.1.1). Such lack of incentives to monitor portfolio firms creates opportunities for portfolio firm managers to manage reported earnings. Section 2.3.1.2 then discusses the incentives for portfolio firm managers to manage earnings as a result of the short investment horizon of transient institutional investors. The formal hypotheses for the associations between transient institutional investors and income increasing (decreasing) discretionary accruals are detailed in Section 2.3.1.3.

### **2.3.1.1 *Short-term oriented (transient) institutional investors and their involvement in portfolio firms' corporate governance***

Short-term oriented institutional investors are often referred to as myopic, or transient, investors, who focus excessively on current earnings rather than long-term earnings in determining stock prices (Bushee, 1998; Porter, 1992). Several reasons have been forwarded to explain the short-term focus of these institutional shareholders. First, it has been argued that institutional shareholders face several economic disincentives to actively govern their portfolio firms. For example, quarterly assessments of institutional investors' performance together with relative performance assessments, *via* industry performance ranking of institutional investors, have created incentives for institutional investors to adopt a short investment horizon (see Black and Coffee, 1994; Coffee, 1991; Stapledon, 1996a, 1996b; Bushee, 1998; El-Gazzar, 1998; Hessel and Norman, 1992; among others).

Such a short time horizon deters institutional investors from incurring monitoring costs as the benefits of governing the portfolio firms are unlikely to accrue to the investors in the short run (Black and Coffee, 1994; Coffee, 1991; Porter, 1992). In his 1998 speeches, Mr. Arthur Levitt, the then Chairman of the US Securities and Exchange Commission (SEC), repeatedly expressed his concerns over the culture of unforgiving investors severely penalising their portfolio firms' stock value as a result of their portfolio firms' failure to meet or beat Wall Street earnings projections.<sup>24</sup> Bushee (2001) finds evidence that transient institutional investors exhibit strong preference for near-term earnings and this preference translates into misvaluation of

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<sup>24</sup> Among the speeches are those delivered to the American Institute of Certified Public Accountants (AICPA) in December 1998, the Financial Executives Institute in November 1998, and at the New York University's Center for Law and Business in September 1998.

stock prices, where near-term (long-term) earnings are over-weighted (under-weighted).

Moreover, the need for liquidity to rebalance their portfolio to maintain or to improve their own performance does not allow sufficient time for transient institutions to actively involve in monitoring their portfolio firms (Black and Coffee, 1994; Coffee, 1991; Ramsay and Blair, 1993; Stapledon, 1996a, 1996b). For example, any monitoring of a portfolio firm generally requires a time horizon beyond the investing institutions' own performance evaluation cycles (e.g., quarterly) and requires continuous resource commitment (financial and non-financial) from the institutions involved to the portfolio firms being monitored. In order to carry out such monitoring activities, a portion of the funds available to the institutions is tied to the portfolio firm (in which monitoring is carried out) for a period longer than their performance assessment cycle. This decreases the liquidity of the funds under institutional investors' management and can potentially limit the portfolio rebalancing strategy available to them. In turn, this can affect the institutional investors' short-term performance. At the extreme, the monitoring effort may have to be abandoned in order to maintain or achieve institutions' own performance targets in the short-term. Under this scenario, the institutions have to bear the monitoring costs incurred so far that will not generate any future benefits for the institutions.

Other economic factors that discourage institutional shareholders from actively monitoring their portfolio firms include the institutional investors' limited financial



resources;<sup>25</sup> the free-rider problem (Black, 1992; Pozen, 1994), and the conflicts of interests arising from institutional monitoring that can potentially cause the loss of other business that the monitoring institutions have with the portfolio firm being monitored (Black, 1992; Coffee, 1991; Brickley, Lease and Smith, 1988), etc.<sup>26</sup>

The US legal environment in which the institutions operate represents another barrier to institutional involvement in corporate governance. Various studies indicate that institutions subject to strict fiduciary duties (e.g., “prudent man” law) have incentives to sell stocks with declining earnings and tilt towards high quality stocks (Badrinath, Gay and Kale, 1989; Del Guercio, 1996; Eakins, Stansell and Wertheim, 1998).<sup>27</sup> “Prudent man” laws are intended to protect beneficiaries by allowing them to seek damages from a fiduciary who fails to invest in the beneficiaries’ best interest. However, prudence standards as accepted by courts are based upon the characteristics of isolated assets rather than upon the individual assets’ marginal effects on a portfolio - inconsistent with the modern portfolio theory (Del Guercio, 1996). Such assessment of prudence by courts can thus encourage institutional investors to focus on the short-term performance of the firms they invest in and to unload the shares of “non-performing” firms. Bushee (2001) finds evidence

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<sup>25</sup> Although institutional investors, in general, have more financial resources relative to individual investors, they do not have infinite resources. Nor do they have unlimited resources dedicated to monitoring activities. Black (1998) finds that only a small number of institutional investors in the US spend a trivial amount of money on monitoring efforts, while others spend none. He also finds that institutional investors that employ active money management strategy spend 100 times more on stock picking than institutional investors who are actively involved in portfolio firms’ corporate governance spend on corporate governance issues. In general, most advisory fees institutional investors charge their clients are based on the assumption that they will usually function as passive investors rather than as activists. Thus, such fees do not cover the costs of heavy intervention on the part of the institutional investors (Pozen, 1994).

<sup>26</sup> See Coffee (1991) and Stapledon (1996a) for further discussions of economic factors affecting institutional investors’ participation in corporate governance.

<sup>27</sup> Standard and Poor’s *Earnings and Dividend Rankings on Common Stocks* has generally been used as a proxy for quality, for example, Badrinath et al. (1989) and Del Guercio (1996).

consistent with institutional investors subject to strict fiduciary standards (e.g., banks) exhibiting strong preference for near-term earnings.

Other practical and political disincentives for institutional monitoring include information asymmetry between the institutional investors and management; the lack of expertise by the institutions, in general, to intervene (Black, 1998; Pozen, 1994; Stapledon, 1996a);<sup>28</sup> and the heterogeneity of institutional investors' approaches to monitoring (Del Guercio and Hawkins, 1999).

Taken together, the above analysis suggests that there is generally a lack of incentives for transient institutional investors to become actively involved in corporate governance. Rather, this type of institutional investor is likely to take a non-interventionist approach to the management of public companies and to prefer the 'Wall Street Walk' when portfolio firms are not performing up to their expectations (e.g., Black, 1998; Black and Coffee, 1994; Coffee, 1991). In short, transient institutional investors have strong incentives to trade on reported earnings rather than actively engage in corporate governance activities.

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<sup>28</sup> It has been a widely accepted assumption that institutional investors, in general, have the required skills to monitor and govern the day-to-day operation of the portfolio firms that they are intervening. However, Black (1998) comments that "[p]articular institutional investors may have the skill to improve the performance of their portfolio companies... but this skill may be scarce among institutional investors as a whole." Even if the institutional investors have the necessary skill to monitor or improve the performance of the portfolio firms, they might lack the skills necessary to run an intervention campaign (Stapledon, 1996b).

### ***2.3.1.2 Earnings management incentives created by transient institutional investors***

Portfolio firm managers have incentives to manage earnings to avoid an earnings disappointment that could trigger a large-scale institutional investor selling and a temporary misvaluation of the firm's shares (Porter, 1992; Graves and Waddock, 1990) if the following conditions are satisfied: (a) managers have incentives to avoid temporary misvaluation caused by earnings disappointment; and (b) institutional shareholder trading is sensitive to current earnings news and can cause a temporary misvaluation (see Bushee, 1998).

Incentives for portfolio firm managers to avoid earnings disappointment exist because portfolio firm managers' compensation packages are generally tied to both the current reported earnings performance of the portfolio firms as well as the portfolio firms' share price performance (Murphy, 1999). Matsunaga and Park (2000) find that managers of firms that report an earnings decline suffer a reduction in compensation equivalent to approximately 6.8% of their cash salary. Therefore, an earnings disappointment can have a significant direct impact on portfolio firm managers' compensation.

In addition, portfolio firm managers' compensation is indirectly affected by earnings disappointments through the impact of earnings disappointments on share prices. As noted above, there exists a culture whereby investors severely penalise their portfolio firms' stock values when portfolio firms fail to meet or beat market earnings expectations. Pound and Shiller (1987) find evidence indicating that 55% of the institutional investors they surveyed would choose to sell their shareholdings solely

based on bad news about current or near-term earnings appearing in the *Wall Street Journal* (e.g., short-term disappointment in earnings performance). When poor current earnings performance causes an undervaluation of the firm's share price, then portfolio firm managers' compensation declines. Furthermore, the threat that a raider can exploit a temporary undervaluation represents another incentive to avoid earnings disappointment that can potentially lead to such undervaluation (Porter, 1992; Graves and Waddock, 1990).

Burgstahler and Dichev (1997) and Myers and Skinner (1999) provide empirical evidence indicating that managers have incentives to avoid earnings decreases or losses, especially when there is an established pattern of earnings growth/positive earnings. Barth, Elliott and Finn (1999) find that the market rewards earnings growth and that the earnings of firms with continual growth are valued more highly than those of firms with the same level of, but more erratic, growth. Furthermore, about 60% of the 400 CEOs (drawn from the *Business Week Top 1000*) surveyed by the *Business Week* Harris Poll indicate that institutional investors exert most pressure on companies to focus on short-term performance (Nussbaum, 1987). In addition, the managerial labour market disciplines managers based on the firm's reported performance (Fama, 1980). As such, firms' reported earnings are one piece of the evidence of managerial performance used both in the internal and external managerial labour markets. Puffer and Weintrop (1991) find that CEO turnover occurs when firms' earnings performance is below expectation and that CEO turnover decisions are based on current year earnings performance.

Prior research finds that increased institutional shareholding is associated with higher trading volume (Kim, Krinsky, and Lee, 1997) and stock return volatility around

quarterly earnings announcements (Potter, 1992), as well as temporary undervaluations (Brown and Brooke, 1993; Sias, Starks and Titman, 2000). When asked in a survey how they put together their current portfolio or the portfolios they manage, 95% of the institutional investors surveyed indicated that expectation of an unusual profit opportunity in that stock at the time of purchase was their primary motivation for purchasing each stock (Pound and Shiller, 1987). Also, as discussed earlier, institutional investors have incentives to trade based on reported earnings. This empirical evidence, together with the findings in Barth et al. (1999), suggests that institutional shareholder trading is sensitive to current earnings news and can cause a temporary misvaluation in share prices. In addition, Bushee (2001) finds that transient institutional investors' preferences for near-term earnings lead to over-(under-) weighting of near-term (long-term) earnings and a trading strategy exploiting this weighting scheme generates significant abnormal returns.

The above analysis indicates that short-term oriented institutional investors' trading is sensitive to current earnings performance of their portfolio firms. This short-term orientation of institutional investors, coupled with incentives for portfolio firm managers to avoid earnings disappointment, creates an environment that encourages portfolio firm managers to manage reported earnings aggressively to achieve earnings targets. In addition, the hands-off approach to corporate governance by institutional shareholders also provides more scope for the portfolio firm managers to manage their reported earnings.

### 2.3.1.3 Formal Hypotheses

From the above, transient institutional investors are characterised as short-term oriented, impatient investors, who prefer current or near-term earnings to long-term earnings and prefer the “Wall Street Walk” when their portfolio firms are underperforming (e.g., Black, 1998; Bushee, 1998, 2001; Pound and Shiller, 1987). In launching the SEC’s effort to crack down on the practice of corporate earnings management, Mr. Arthur Levitt, the immediate past Chairman of the SEC, repeatedly points out an unforgiving culture of the Wall Street market punishing firms that fail to meet their earnings target.<sup>29</sup> In a *Business Week* Harris Poll of 400 CEOs, 60% of the respondents cite institutional investors as a prime source of short-term performance pressure (Nussbaum, 1987). As Fox (1997, 77) puts it, “...the simplest, most visible, most merciless measure of corporate success in the 1990s has become this one: Did you make your earnings last quarter?”

Consistent with these observations, Bushee (2001) finds that transient institutional investors’ strong preference for near-term earnings translates into myopic mispricing by transient institutional investors.<sup>30</sup> Furthermore, Bushee (1998) finds that when transient institutional investors dominate portfolio firms’ equity ownership, managers of these portfolio firms are more likely to cut R&D expenditure to bolster current year reporting earnings. Empirical evidence also supports a view that portfolio firm managers have incentives to avoid earnings decreases or losses,

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<sup>29</sup> DeGeorge, Patel and Zeckhauser (1999), Myers and Skinner (1999) and Burgsthaler and Dichev (1997) all find empirical evidence that managers have incentives to avoid earnings decreases. Consistent with these findings, this study assumes that firms’ earnings targets will be at least the same level of earnings as prior year earnings. The next chapter further examines the relation between institutional ownership and discretionary accruals by conditioning portfolio firms’ pre-managed earnings upon their earnings targets.

<sup>30</sup> In particular, transient institutional investors are found to overweight near-term earnings potential while underweighting long-run value (Bushee, 2001).

especially when there is an established pattern of earnings growth/positive earnings (Burgstahler and Dichev, 1997; Myers and Skinner, 1999). The market is also found to reward continual earnings growth and this premium reduces when the earnings string ends (Barth et al., 1999). Therefore, transient institutional investors' near-term earnings preference and overvaluation of near-term earnings create incentives for portfolio firm managers to inflate current reported earnings, through income increasing discretionary accruals, to help meet or even better their earnings targets in order to avoid a potential off-loading of large blocks of their firms' stock by transient institutional investors. Consistent with this line of argument, transient institutional ownership is expected to be positively associated with income increasing discretionary accruals.

**H1: *Within portfolio firms with income increasing discretionary accruals, those firms with high levels of transient institutional ownership have LARGER income increasing discretionary accruals than other firms.***

However, an alternative scenario arises when portfolio firms face a "certain" prospect of falling short of their earnings targets. Under this scenario, traditional "big bath" arguments (e.g., Healy, 1985) would suggest that managers have incentives to maximise negative discretionary accruals when the portfolio firm is unlikely to achieve a specific earnings target *via* the available positive discretionary accruals.<sup>31</sup> This line of argument suggests that, when faced with a certain short-fall, managers of portfolio firms have strong incentives to write off as much negative discretionary accruals as possible and save current year positive discretionary

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<sup>31</sup> For example, Healy (1985), in the context of managerial bonus plan, argues that when a manager cannot achieve the lower bound of earnings level (where bonus will be paid out) through discretionary accruals, the manager has incentives to incur negative discretionary accruals to "save" up current year accruals for future years.

accruals for future periods, thereby creating the greatest possible amount of accounting slack for future periods.

For portfolio firms with negative discretionary accruals, the incentives to incur income decreasing discretionary accruals are enhanced as transient institutional ownership increases. The anecdotal evidence on the “missing by a penny” scenario (e.g., Levitt’s 1998 speeches) is that if a company can’t find that “extra penny” to satisfy Wall Street, then the company must be in trouble, and since missing by a penny is going to significantly dampen the stock price, a portfolio firm is better off missing by “a dime or two and saving those earnings for the next quarter” (Fox, 1997, 78). When transient institutional investors systematically off-load portfolio firms that under-perform (based on current earnings performance) regardless of the magnitude of the short-fall, then managers of portfolio firms have incentives to take a “big bath” whenever their earnings targets cannot be met through accruals management. Therefore,

***H1a: Within portfolio firms with income decreasing discretionary accruals, those firms with high levels of transient institutional ownership have LARGER income decreasing discretionary accruals than other firms.***

One assumption underlying this hypothesis is that all portfolio firms that engage in negative discretionary accruals fail to meet their earnings targets. However, portfolio firms can engage in negative discretionary accruals when they already outperform their earnings targets in order to save more current year accrual for future years consistent with the income smoothing hypothesis. Hence, the assumption is



relaxed in Chapter 3 discussions that more specifically examine the “big bath” and income smoothing hypotheses.

### **2.3.2 Long-term oriented institutional investors’ impact on earnings management**

This sub-section develops hypotheses concerning the relations between long-term oriented institutional investors and their portfolio firms’ income increasing (decreasing) discretionary accruals. Section 2.3.2.1 examines the incentives for long-term oriented institutional investors’ involvement in portfolio firms’ corporate governance. It investigates how this involvement affects portfolio firm managers’ earnings management discretion and incentives to manage reported earnings. Section 2.3.2.2 formalises the hypotheses predicting associations between long-term oriented institutional investors and income increasing (decreasing) discretionary accruals.

#### **2.3.2.1 *Long-term oriented institutional investors’ involvement in corporate governance and their impact on portfolio firm managers’ earnings management***

As firms’ share ownership becomes more concentrated among smaller numbers of institutional investors that are actively involved in their portfolio firms’ governance, problems caused by the separation of ownership and control outlined in the previous

section are likely to be less prevalent. Recent studies investigating the effects of institutional ownership on earnings management behaviour of managers in various contexts suggest that institutional investors are not necessarily myopic (see e.g., Bushee, 1998; Majumdar and Nagarajan, 1997; Rajgopal and Venkatachalam, 1998). Bushee (1998) finds that, in general, institutional ownership reduces managerial incentives to manage earnings upward through R&D spending cuts while Majumdar and Nagarajan (1997) find evidence that the level of total institutional ownership in firms is associated positively with relatively higher spending on R&D and capital expenditures. In addition to finding a positive relationship between R&D expenditure and institutional ownership, Wahal and McConnell (1997) document a positive relation between expenditure for property, plant and equipment and institutional share ownership. Such relations are found to be robust to a variety of specifications, thus indicating that institutional shareholders encourage long-term investment by portfolio firm managers in property, plant and equipment and R&D.

Dechow, Sloan and Sweeney (1996) also find that the presence of large outside blockholders (who own more than 5% of the equity) mitigates managerial incentives to report aggressively. Rajgopal and Venkatachalam (1998) find that institutional ownership, as a whole, is associated with a smaller magnitude of discretionary accruals, and with less income-increasing discretionary accruals. Combined, all these results support the view that institutional investors monitor their portfolio firms and their presence reduces the incidence of earnings management.

High levels of monitoring by sophisticated, large long-term oriented institutional investors reduce managerial incentives for earnings management. As such, the presence of long-term institutional investment in a portfolio firm can constrain

managerial opportunistic behaviour as well as help enforce managerial behaviour that will enhance shareholder value and the long-term prospects of firms. Shleifer and Vishny (1986, 1997) and Carleton, Nelson and Weisbach (1998) suggest that institutions have sufficient economic incentives to protect their significant stake in the portfolio firms by active monitoring. The large equity ownership stakes by institutional investors create a "simple but overwhelming economic incentive" for institutional investors to become informed and involved owners (Pound, 1992).

Reasons for involvement by institutional investors in the corporate governance of their portfolio firms include the fact that as institutional shareholding grows, the exit option becomes more expensive since a large block sale generally entails large discounts (Black and Coffee, 1994; Coffee, 1991; Rajgopal and Venkatachalam, 1998).<sup>32</sup> Therefore, when the exit option is "...effectively blocked, dissatisfaction with a firm's performance must be expressed through voice" (Hawley, 1995, 420). Furthermore, given the large monetary value tied to these large shareholdings, institutional investors stand to lose more than investors with small shareholding stakes if they remain passive or choose to be less informed of their portfolio firms when their portfolio firms are under-performing. In Pound's words,

*"[t]he sheer size of this stake and the trading costs associated with selling make the institution 'captive.' For large investors, it is cheaper to become informed and attempt to change corporate policy than it is to sell." (Pound, 1992, 87).*

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<sup>32</sup> The growth in equity ownership by institutional investors in the 1990s has increased the inelasticity of demand for large-volume sales of under-performing firms. The would-be institutional sellers are likely to find themselves offering the under-performing shareholdings to institutional would-be buyers whose portfolios and interests mirror one another, making meaningful sale unlikely (Hawley, 1995). Therefore, institutional investors are unlikely to be able to sell their under-performing shareholding without depressing the market, thereby taking a loss.

Also, collective actions by institutions become less costly as share ownership concentrates on a smaller number of shareholders. Thus, incentives for group action increase as the group size decreases. The ability to form a small and relatively homogenous group of institutional investors can facilitate the monitoring process as well as sharing the monitoring costs among the group members, thus reducing the demand on individual institutional investors' limited financial resources. One avenue for such a coordinated exercise is through a third party monitoring organisation such as the Council of Institutional Investors (CII). Such organisations provide a forum for their members to share information and to jointly monitor their portfolio firms (Opler and Sokobin, 1995).<sup>33</sup> Relative to individual investors, institutional investors have economies of scale in information gathering and analysis as well as the needed skills to engage in corporate governance actions (Black, 1992). The growth in index funds, which rules out the sale of shares as a response to poor share performance, has encouraged institutions to follow buy and hold strategies.<sup>34</sup> Buy and hold strategies can motivate institutions to take a more active role in corporate governance (Carleton et al, 1998; Pozen, 1994; Rajgopal and Venkatachalam, 1998; Wahal, 1996).<sup>35</sup>

Recent institutional investor involvement in portfolio firms' corporate governance has been seen as a natural response to the decline in the takeover market and the rise

<sup>33</sup> Opler and Sokobin (1995) find that "behind closed doors" governance activities coordinated by the Council of Institutional Investors improve target firms' operating and stock market performance.

<sup>34</sup> Pozen (1994) argues that the "Wall Street Walk" is not a viable option for institutional investors employing a passive indexed strategy due to the size of their shareholdings.

<sup>35</sup> In contrast, Bushee (1997) argues that buy and hold strategies exacerbate managerial myopia because the institutional investors' passive and fragmented ownership causes them to gather little information on the portfolio firms and provides little incentives to monitor managers of the portfolio firms. However, Del Guercio and Hawkins (1999) find that heavily indexed funds (e.g., CalPERS, CalSTRS, and NYC) do engage in monitoring actions even though their activism strategies differ from funds adopting different types of investment strategies. Stapledon (1996b) provides further discussion on the effects of indexing or buy and hold strategies on institutional investor incentives to monitor.

of informed institutional investors (Pound, 1992).<sup>36</sup> Black (1992) and Pound (1992) argue that institutional investor activism is an evolution from the market- and transaction-based model of corporate governance (as characterised by hostile takeovers) to the political-based model (as characterised by relationship investment). This political model of corporate governance is more flexible in addressing specific issues, far less expensive than hostile takeovers, and it focuses on the long-term interest of the target firms (Pound, 1992).<sup>37</sup> In addition to the highly publicised proxy contests, ample evidence exists to indicate that institutional investors engage in “behind closed door” negotiation and monitoring of their portfolio firms (e.g., Carleton et al, 1998; Opler and Sokobin, 1995; and Smith, 1996). This suggests that institutional investors are not “functionally fixated” on their portfolio firms’ current earnings performance in their investment decisions. Hand (1990), Utama and Cready (1997), El-Gazzar (1998) and Bartov, Radhakrishnan and Krinsky (2000), among others, use institutional ownership as a proxy for the type of sophisticated investor that would not be ‘functionally fixated’ on earnings. Furthermore, Bushee (2001) finds that only transient institutional investors exhibit a preference for near-term earnings but not long-term oriented institutional investors.

All the above arguments indicate that long-term oriented institutional investors engage in relationship investment with a commitment to provide long-term capital (Dobrzynski, 1993; Porter, 1992). Accordingly, through their involvement with portfolio firms’ governance and their monitoring activities, long-term oriented institutional investors are likely to set boundaries on portfolio firm managers’

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<sup>36</sup> Examples of institutional activism can be found in Carleton et al. (1998) study on TIAA-CREF, Smith (1996) study on CalPERS, among others.

<sup>37</sup> In contrast, the market-based model generally involves drastic measures at high costs, and disruptive changes. It is often viewed with suspicion and subject to retaliation from the management and/or political retaliation in the form of antitakeover legislation (Pound, 1992; Wahal, 1996).

accruals discretion such that the levels of discretion exercised by managers within those boundaries are acceptable to the long-term oriented investors, and the investors do not need to incur costs to unravel the discretion in addition to the monitoring costs already incurred.<sup>38</sup> Thus, long-term oriented institutional investors limit the accruals discretion available to portfolio firm managers and serve to constrain portfolio firm managers from managing earnings (Rajgopal and Venkatachalam, 1998; Cheng and Reitenga, 2000).<sup>39</sup>

Schipper (1989, 98) argues that “[c]oncentrated user groups with substantial financial sophistication, material sums at stake, and no contractual friction to inhibit their behaviour are, for example, likely candidates for undoing earnings management.” Bushee (1998) argues that given the size of institutional investors’ investments and their use of buy-side analysts, institutional investors could be one of these concentrated user groups and serve to reduce managerial incentives for managing earnings to meet short-term earnings targets. Moreover, El-Gazzar (1998) finds that institutions have incentives to search for predisclosure information and are able to incorporate such information into share prices prior to firms’ earnings announcements. He also finds that the greater the institutional ownership, the less information is contained in the earnings announcements. This evidence indicates that information asymmetry between institutional shareholders and managers of the

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<sup>38</sup> Long-term oriented institutional investors’ involvement in limiting accruals discretion may be motivated by their desire to prevent misrepresentation of their portfolio firms’ financial affairs.

<sup>39</sup> Furthermore, according to this view of institutional investors as sophisticated long-term shareholders, long-term oriented institutional investors’ presence does not provide specific incentives for portfolio firm managers to adopt an *aggressive* earnings management strategy in contrast to transient institutional investors. It is noted that it can be argued that long-term oriented institutional ownership may create incentives for portfolio firm managers to manage earnings in a particular manner, *within the limited discretion available to the portfolio firm managers*, to achieve certain objectives such as income smoothing. However, such incentives are likely to exist under specific circumstances which are investigated further in Chapter 3. This section focuses on the overarching effects of long-term institutional investors on portfolio firm managers’ accrual discretions.

portfolio firms is reduced as institutional ownership increases. It suggests that institutional investors are likely to be informed investors.

While examining how the presence of information asymmetry affects management incentives to manage earnings, Richardson (1998) finds that as the level of information asymmetry between management and shareholders increases, firms are more likely to manage accruals. Taken together, the findings in El-Gazzar (1998) and Richardson (1998) suggest that as long-term oriented institutional ownership in a firm increases, information asymmetry between management and shareholders decreases and portfolio firms are less likely to manage earnings to meet short-term earnings performance targets. This, in conjunction with long-term oriented institutional investors' involvement in portfolio firms, suggests that their presence reduces the likelihood of earnings management by their portfolio firm managers (Bushee, 1998; Rajgopal and Venkatachalam, 1998; Cheng and Reitenga, 2000).

### ***2.3.2.2 Formal Hypotheses***

The above discussions imply that long-term oriented institutional investors are likely to have a good understanding of the operating environment of their portfolio firms. Furthermore, they do not exhibit a preference for near-term earnings, as do transient institutional investors (Bushee, 2001). Therefore, they are less likely to penalise portfolio firms solely on the basis of under-performing current earnings which are not a result of poor management. Through their monitoring activities, long-term oriented institutional investors are likely to restrict the earnings management discretion available to portfolio firm managers and are unlikely to exert pressure for

managers of portfolio firms to aggressively manage discretionary accruals to meet short-term earnings targets (e.g., Rajgopal and Venkatachalam, 1998).

If long-term institutional ownership constrains portfolio firm managers' earnings management discretion, then for portfolio firms that engaged in income-increasing discretionary accruals, long-term oriented institutional ownership is expected to *negatively* associate with discretionary accruals. On the other hand, for portfolio firms that engaged in income-decreasing discretionary accruals, a *positive* association between long-term oriented institutional ownership and discretionary accruals is expected.<sup>40</sup> Formally,

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<sup>40</sup> In a similar study, Rajgopal and Venkatachalam (1998) find that institutional ownership, *as a whole*, is negatively associated with income increasing discretionary accruals (i.e., positive discretionary accruals) after controlling for other factors affecting discretionary accruals. This is consistent with long-term oriented institutional investors limiting managerial accrual discretion as predicted by this study (H2). In addition, they also find a negative relation between institutional ownership, *as a whole*, and income *decreasing* discretionary accruals (i.e., negative discretionary accruals). They conclude that these results are inconsistent with the transient institutional investor arguments. An alternative interpretation of this result is that long-term oriented institutional investors create incentives for managers of portfolio firms to engage in overtly conservative accruals management through their monitoring activities. This thesis refers to such conservative accruals management as "reverse" myopic behaviour because it involves managers of portfolio firms focusing on managing reported earnings over a short-term *via* discretionary accruals. Conservative accruals management in this study refers to the adoption of less income increasing or more income decreasing discretionary accruals strategy than otherwise. This is consistent with the conservatism concept stipulated by Statement of Financial Accounting Concepts (SFAC) 2 (FASB, 1980) and Basu (1997). The difference between "reverse" myopia and myopia in its traditional form is that the former involves managing earnings downwards whilst the latter involves managing earnings upwards.

As argued above, long-term oriented institutional investors are expected to constrain portfolio firm managers' discretion over accruals management. As such, a positive relation between long-term oriented institutional ownership and income decreasing discretionary accruals is expected (H2a). Therefore, Rajgopal and Venkatachalam (1998) findings are not strictly consistent with the long-term oriented institutional investor argument. Given that they did not distinguish between the different types of institutional ownership, it is difficult to reach an unambiguous interpretation of their findings. For example, the negative relation between institutional ownership, *as a whole*, and income decreasing discretionary accruals can be interpreted as either consistent with "big bath" behaviour induced by transient institutional ownership or consistent with long-term oriented institutional ownership inducing a "reverse" myopic behaviour on portfolio firm managers' part, or a combination of both. It should be noted that it is difficult to distinguish between "big bath" and "reverse" myopia behaviour as they both yield the similar outcome. Further examination of this potential influence of long-term oriented institutional investors is conducted in the next chapter.



**H2: *Within portfolio firms with income increasing discretionary accruals, those firms with high levels of long-term oriented institutional ownership have SMALLER income increasing discretionary accruals than other firms.***

**H2a: *Within portfolio firms with income decreasing discretionary accruals, those firms with high levels of long-term oriented institutional ownership have SMALLER income decreasing discretionary accruals than other firms.***

It can be argued that even though an overarching effect of long-term oriented institutional investors is to restrict portfolio firm managers' accrual discretion, it is possible that their presence can create incentives for portfolio firm managers to manage earnings, *within the limited accruals discretion available to portfolio firm managers*, over multiple periods (e.g., *via income smoothing*). Such a multiple period earnings management strategy would be consistent with the long-term orientation of long-term oriented institutional investors. However, any theory relating to long-term institutional investors and income smoothing behaviour requires specific reference to an earnings target. Given that the hypothesis development in this section examines only the relation between long-term oriented institutional ownership and income increasing (decreasing) discretionary accruals without specifically conditioning upon an earnings target, it does not address issues relating to income smoothing behaviour. Sections 3.4 and 3.5 in Chapter 3 specifically investigate the potential income smoothing incentives created by long-term oriented institutional investors.

## 2.4 *Summary and conclusion*

This chapter discusses the relation between institutional investors and earnings management by first examining the relation between institutional investors and corporate governance. Then the effects of each of two types of institutional investor (transient *versus* long-term oriented) on portfolio firms' earnings management behaviour are discussed in detail. In particular, hypotheses are developed to predict the relation between the types of institutional ownership (transient *versus* long-term oriented) and (a) income increasing discretionary accruals; and (b) income decreasing discretionary accruals.

Transient institutional investors are argued to create incentives for managers of portfolio firms to focus on short-term performance and for these managers to manage their current earnings to meet short-term earnings targets. Specifically, transient institutional ownership is predicted to be (a) positively associated with income increasing discretionary accruals to maximise current year reported earnings; and (b) negatively associated with income decreasing discretionary accruals, thereby creating accounting slack for future periods.

In contrast, long-term oriented institutional investors do not myopically focus on portfolio firm' current earnings performance. Rather, they invest to benefit from the long-term prospects of their portfolio firms and are active in monitoring their portfolio firms. This long-term orientation and active involvement suggest that the presence of long-term oriented institutional investors constrains managerial earnings management discretion. As such, long-term oriented institutional ownership is

expected be negatively (positively) associated with income increasing (decreasing) discretionary accruals.

The next chapter extends the analysis and hypotheses developed in this chapter. In particular, the effects of the two institutional ownership types on discretionary accruals are examined with reference to a common earnings target identified by the extant literature. Comparing portfolio firms' pre-managed earnings with their earnings targets enables less ambiguous predictions in relation to the effects of institutional ownership on accruals management.

### **3 Influence of Institutional Investor Type on Earnings**

#### **Management: Effects of Earnings Targets**

##### **3.1 Introduction**

This chapter extends the Chapter 2 analysis of the relations between different types of institutional ownership and portfolio firms' income increasing and income decreasing discretionary accruals. In particular, this chapter investigates how different types of institutional investors are associated with portfolio firm managers' incentives for accruals management, conditional upon the portfolio firms' earnings targets. Such consideration enables more refined predictions than those proposed in Chapter 2. Also, it provides a better understanding of the effects of different types of institutional investors on portfolio firms' earnings management behaviour under specific circumstances. The analysis acknowledges and incorporates considerations such as (a) firms' pre-managed earnings relative to their earnings targets and their capacity to achieve those targets;<sup>41</sup> (b) the heterogeneity of institutional investors; (c) the potential diversity of the effects of different types of institutional ownership on accruals management. Given that no known study explicitly treats earnings targets as a factor affecting the relation between institutional ownership types and accruals management, and earnings management in general,<sup>42</sup> this thesis extends the current understanding of the relation between institutional ownership types and accruals management by portfolio firm managers.

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<sup>41</sup> The term "capacity" is used to refer to discretionary accruals available to managers of portfolio firms as constrained by factors such as existing business operations.

<sup>42</sup> Bushee (1998) is the only known study that explicitly investigates the relation between institutional ownership types and earnings management. Bushee (1998) investigates the relation between institutional ownership types and earnings management through real investment decisions, viz., R&D expenditure, rather than accruals management.

While Chapter 2 provides a *general* understanding of the relations between types of institutional investors and income increasing (decreasing) discretionary accruals, this chapter provides a more *specific* understanding of the relations between types of institutional investors and discretionary accruals management. For example, while Chapter 2 predicts an overarching constraining effect of long-term oriented institutional investors on portfolio firm managers' accruals discretion, Chapter 3 examines whether long-term oriented institutional investors create incentives for portfolio firm managers to manage earnings, *within the limited accruals discretion available to them*.

Section 3.2 discusses recent evidence on the importance and effects of earnings targets on firm managers' earnings management incentives. This section then classifies portfolio firms into three categories, namely "reversible decline", "irreversible decline" and "increased", according to the relative position of their earnings targets and pre-and post-managed earnings.<sup>43</sup> The effects of different types of institutional ownership on portfolio firms' discretionary accruals are then analysed within each of these categories in three separate sections. In particular, Section 3.3 provides a closer examination of transient and long-term oriented institutional investor arguments underpinning hypotheses 1 and 2 (detailed in Chapter 2) using "reversible decline" firms. Section 3.4 discusses the characteristics of the "irreversible decline" and "increased" firm classifications that enable a close examination of income smoothing behaviour among these firms. Section 3.5 investigates the "big bath" ("reverse" myopia) *versus* income smoothing incentives

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<sup>43</sup> "Reversible decline" category includes portfolio firms with *pre*-managed earnings less than their earnings targets but achieve *post*-managed earnings greater than their earnings targets through positive discretionary accruals. "Irreversible declines" category encompasses portfolio firms with both *pre*- and *post*-managed earnings less than their earnings targets. Finally, portfolio firms with *pre*-managed earnings greater than their earnings targets are included in the "increased" category. See Section 3.2 below for detail discussions of the classification.

of transient (long-term oriented) institutional investors among “irreversible decline” firms. Section 3.6 examines the accruals management incentives created by the two types of institutional investors among “increased” firms. Income smoothing incentives are also examined in Section 3.6 among “increased” firms that also reported an increase in current year reported earnings. Finally, Section 3.7 summarises and concludes this chapter.

### 3.2 *Earnings targets*

Recent research by Burgstahler and Dichev (1997) and Degeorge et al. (1999) finds that small declines in reported earnings are unusually rare while small increases in reported earnings are unusually common. Their evidence suggests that managers have incentives to avoid earnings decreases. Furthermore, incentives to avoid earnings decreases are higher when there is an established pattern of earnings growth/positive earnings (Burgstahler and Dichev, 1997). In addition, Barth et al. (1999) find that, *ceteris paribus*, firms reporting continuous growth in annual earnings (a) are priced at a premium relative to other firms; (b) this premium increases with the length of the earnings growth string; and (c) the premium reduces when the earnings growth string ends. Degeorge et al. (1999) also find empirical evidence supporting a hierarchical ranking of earnings targets, whereby sustaining the prior year earnings level is more important than meeting analysts’ consensus earnings forecasts. Furthermore, Murphy (1999), while examining actual compensation contracts, notes that prior year earnings are explicitly included as one

of the performance measures in compensation contracts.<sup>44</sup> Based on the findings of these studies, this thesis assumes that the prior year earnings level represents the main earnings targets of portfolio firm managers.<sup>45, 46</sup>

This study also recognises that not all portfolio firm managers have both the incentives and capacity to manage earnings in their intended manner. For example, a manager who wishes to manage reported earnings upwards to avoid earnings decreases might not have sufficient positive discretionary accruals available to achieve the intended earnings outcome.<sup>47</sup> To address this concern and to specifically take into consideration firms' earnings targets, three specific sub-categories of portfolio firms are created. These sub-categories are based on the portfolio firms' current year non-discretionary earnings (NDE) relative to the prior year reported earnings (earnings target).<sup>48</sup> This categorisation technique based on firms' distance from their earnings targets is consistent with Baber, Fairfield and Haggard (1991). The first category includes those firms with current year non-discretionary earnings less than prior year reported earnings but which achieved an increase in current year

<sup>44</sup> However, Murphy (1999) makes no reference to analyst forecasts as one of the performance measures explicitly stated in compensation contracts.

<sup>45</sup> Sustaining prior year reported earnings levels and/or avoiding earnings decreases implies that prior year earnings levels are generally the lower bound of firms' earnings targets. If the sample firms have earnings targets higher than the last year's earnings level, then using prior year earnings as the earnings target will bias against the predictions for all three partitions of sample firms discussed later in the text, namely "reversible decline", "irreversible decline" and "increased".

<sup>46</sup> This study uses earnings deflated by total assets in favour of earnings per share (EPS) to ensure consistency in scaling with accruals that are deflated by total assets rather than total shares outstanding. Furthermore, Myers and Skinner (1999) find evidence that managers manage shares outstanding (i.e., the denominator of EPS) in addition to earnings (i.e., the numerator of EPS) to increase EPS. The main assumption underlying Myers and Skinner (1999) arguments is that managers have stronger incentives to report increases in EPS than increases in earnings. Given that this study focuses only on earnings management *via* reported earnings, by using earnings scaled by total assets, it avoids confounding any potential effects of earnings management *via* shares outstanding to improve EPS (as found in Myers and Skinner, 1999). A limitation of not using EPS is that any systematic earnings management *via* shares outstanding will not be captured by this study.

<sup>47</sup> Insufficient positive discretionary accruals may be due to the firm's business operations during that period or due to close monitoring that restricts managers' accruals discretion.

<sup>48</sup> Non-discretionary earnings (NDE) are non-discretionary with respect to accruals management only. That is, non-discretionary earnings are derived by excluding the estimated discretionary accruals (estimated through the cross-sectional version of modified Jones model) from current year reported earnings. See Chapter 5 for further detail on discretionary accruals estimation.

reported earnings *via* positive discretionary accruals. Firms within this category are referred to as “reversible decline” firms (RD).<sup>49</sup> The second category consists of firms whose current year non-discretionary earnings are below the prior year’s reported earnings but by an amount that is NOT fully reversed by the current year’s estimated discretionary accruals.<sup>50</sup> These firms are referred to as “irreversible decline” firms (ID).<sup>51</sup> Finally, firms with current year non-discretionary earnings greater than prior year earnings are included in the category labelled “increased” firms (IN).

The above categorisations provide unique classifications to specifically examine and test the existence of various incentives created by different types of institutional investors for portfolio firms’ accruals management decisions. For example, a significant positive relation between transient institutional ownership and discretionary accruals among the “reversible decline” (RD) firms would provide strong support for arguments that transient institutional ownership creates incentives for portfolio firm managers to aggressively manage their accruals. In contrast, a significant negative relation between long-term oriented institutional ownership and discretionary accruals by the “reversible decline” (RD) firms would strongly support the overarching constraining effects of long-term oriented institutional investors. The “irreversible decline” (ID) firms provide unique circumstances to test (a) the “big bath” *versus* income smoothing incentives provided by transient institutional investors, and (b) the “reverse” myopic *versus* income smoothing incentives provided by long-term oriented institutional investors. Finally, the “increased” (IN)

<sup>49</sup> By definition, all firms within the “reversible decline” category engaged in positive discretionary accruals.

<sup>50</sup> By definition, these “irreversible decline” firms failed to meet their earnings targets, *viz.*, prior year’s reported earnings, *after* accruals management.

<sup>51</sup> The term “irreversible” used here only implies the decline is not reversible by using positive discretionary accruals alone.



firms with an increase in current year earnings enable more specific tests for income smoothing effects of both types of institutional ownership.

### 3.3 *Institutional ownership type effects on discretionary accruals amongst “reversible decline” firms*

As mentioned, prior research provides empirical evidence suggesting that managers have strong incentives to avoid unnecessary earnings decreases (Burgstahler and Dichev, 1997; Barth, et al., 1999; Degeorge et al., 1999; Myers and Skinner, 1999; Matsunaga and Park, 2000) but not all portfolio firm managers have both the incentives and capacity to manage their earnings to achieve their intended earnings outcomes. “Reversible decline” (RD) firms are firms with *pre*-managed earnings below the prior year’s earnings levels (earnings targets) and which exercise their accruals discretion to achieve their earnings targets. Their *post*-managed earnings are greater than the prior year’s earnings levels.

If transient institutional investors create incentives for portfolio firm managers to adopt aggressive myopic earnings management strategies to meet earnings targets, then it is likely that such incentives for portfolio firm managers to avoid earnings decreases will be greatest among firms that can exercise their accruals discretion to achieve an increase in reported earnings, such as “reversible decline” firms (Bushee, 1998). Furthermore, “reversible decline” firms have the capacity to meet their earnings targets *via* accruals management. Therefore, the presence of both the incentives (created by transient institutional investors) and capacity for managers of portfolio firms to at least maintain prior year earnings levels allows closer

examination of the transient institutional investor argument underpinning hypothesis 1 detailed in Chapter 2. Within the sub-sample of “reversible decline” firms, a positive relation between transient institutional ownership and portfolio firms’ discretionary accruals would provide evidence strongly supporting the view that transient institutional investors encourage myopic behaviour among portfolio firm managers.

**H3: *Transient institutional ownership in “reversible decline” firms is POSITIVELY associated with these portfolio firms’ discretionary accruals.***

Consistent with the analysis in Chapter 2, long-term oriented institutional investors are institutional investors who are informed, involved and interested in the long-term prospects of the portfolio firms. They are not functionally fixated on the current earnings performance of the portfolio firms. As posited in Chapter 2, long-term oriented institutional investors, through their involvement in the portfolio firms, serve to restrict portfolio firm managers’ earnings management discretion. Given that “reversible decline” firms exercise their accruals discretion to meet their earnings targets, strong support for the argument that long-term oriented institutional investors effectively constrain managerial earnings management discretion can be established if long-term oriented institutional ownership is significantly negatively related to “reversible decline” firms’ discretionary accruals.

**H4: *Long-term oriented institutional ownership in “reversible decline” firms is NEGATIVELY associated with these portfolio firms’ discretionary accruals.***

### 3.4 *Characteristics of the “irreversible decline” and “increased” firm classifications with respect to income smoothing*

This section discusses some of the characteristics inherent within the “irreversible decline” and “increased” firm classifications that render these firms suitable for examining income smoothing behaviour. The characteristics allow stronger conclusions to be drawn in relation to whether either of the institutional ownership types is associated with income smoothing or other competing hypotheses.

Within the extant income smoothing literature, a firm is said to be smoothing income if the firm’s *post*-managed earnings is closer to its pre-determined earnings targets than *pre*-managed earnings (e.g., Ronen and Sadan, 1981; Moses, 1987; Godfrey and Jones, 1999; Carlson and Bathala, 1997) regardless of whether the *post*-managed earnings exceed or fall below the earnings targets. However, recent research on earnings targets has shown that the relative position of *post*-managed earnings levels to earnings targets matters. In particular, this research finds that (a) the number of firms that just meet their prior year’s earnings is unusually large compared to firms that just fall short of their prior year’s earnings (e.g., Burgstahler and Dichev, 1997; Degeorge et al., 1999); (b) the capital market rewards firms with continuous growth in earnings and punishes them when the growth is broken (e.g., Barth et al., 1999; Levitt, 1998);<sup>52</sup> and (c) managers suffer a reduction in compensation of approximately 6.8% of their salary when they fail to meet prior year earnings levels (Matsunaga and Park, 2000).

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<sup>52</sup> The severity of these costs is best illustrate by Fox’s (1997, 77) comment, “...the simplest, most visible, most merciless measure of corporate success in the 1990s has become this one: Did you make your earnings last quarter?” Levitt’s (1998) concerns in initiating the SEC crack down on corporate earnings management are that firms seem to be able to meet their earnings targets *continually*, and for those that are unable to do so, the capital market will severely punish the firm value.

Incorporation of the recent development in capital market incentives studies into existing income smoothing literature emphasises that, for two subsets of firms that manage earnings towards their earnings targets, incentives can no longer be unambiguously attributed to income smoothing incentives. The first subset involves firms with *pre*-managed earnings *below* their earnings targets and with subsequently reported earnings levels equal to or greater than their earnings targets. For this subset of income smoothers, incentives to manage reported earnings can be attributed to income smoothing incentives and/or incentives to meet or beat their earnings targets.<sup>53</sup> Therefore, the earnings management strategy of these firms cannot be unambiguously attributed to income smoothing incentives.

Income smoothing tests that exclude the above subset of firms would incorporate the capital market incentives for firm managers to manage earnings, and are likely to represent more powerful tests than the existing income smoothing methodology. “Irreversible decline” firms possess these characteristics as they include only portfolio firms with both *pre*- and *post*-managed earnings below earnings targets.

The second subset of firms comprises those firms with *pre*-managed earnings *greater* than their earnings targets but with *post*-managed earnings *below* their earnings targets. This second subset of income smoothers is unlikely to achieve the objective of reporting smoother income streams to improve firm value (Ronen and Sadan, 1981) given the loss of firm value associated with missing earnings targets

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<sup>53</sup> Although existing studies such as Barth et al. (1999), Burgstahler and Dichev (1997), Degeorge et al. (1999) and Myers and Skinner (1999) may suggest the latter incentives are likely to dominate managers' incentives, it remains an empirical issue as to which incentive dominates.

(e.g., Barth et al., 1999). Therefore, it is arguable whether income smoothing incentives drive these firm managers' earnings management decisions.<sup>54</sup>

Once again, income smoothing tests that exclude firms that managed their earnings downwards to the extent that they miss their earnings targets incorporate the capital market incentives literature, and are likely to represent more powerful tests than the existing income smoothing methodology. When income smoothing behaviour is examined within "increased" firms with an increase in current year earnings (i.e., *pre-* and *post-*managed earnings greater than earnings targets), then it excludes firms that manage their earnings downwards such that they miss their earnings targets. Examining institutional investor type effects on accruals management within "increased" firms with an increase in current year earnings thus incorporates both the capital market incentives literature and the income smoothing literature.

From the above, "irreversible decline" firms and "increased" firms with an increase in current year reported earnings possess characteristics that increase the test power of the income smoothing hypothesis against competing hypotheses. Consequently, stronger conclusions can be drawn with respect to whether either of the institutional ownership types is associated with income smoothing behaviour.

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<sup>54</sup> Recent developments in the capital market incentives literature focus on (1) the incentives for firm managers to meet or beat their earnings targets; (2) the capital market reward for meeting or beating earnings targets; and (3) the associated costs of missing earnings targets (see e.g., Barth et al. (1999), Burgstahler and Dichev (1997), Dechow et al. (1999) Matsunaga and Park (2000), and Myers and Skinner (1999)). However, there is no known study investigating the reasons and incentives for firm managers to manage earnings downward such that they miss their earnings targets.

### 3.5 *Institutional ownership type effects on discretionary accruals amongst “irreversible decline” firms*

In contrast to “reversible decline” firms, “irreversible decline” (ID) portfolio firms are firms with current year non-discretionary earnings (NDE) below prior year reported earnings but which do not achieve an increase in current year reported earnings *via* discretionary accruals alone. That is, “irreversible decline” portfolio firms are those firms that failed to avoid earnings decreases (i.e., failed to meet their earnings targets) *after exercising* their accrual discretion, either income increasing or income decreasing discretionary accruals.

An implicit assumption underpinning hypothesis 1a about the relation between transient institutional ownership and income decreasing discretionary accruals is that all portfolio firms that engage in income decreasing discretionary accruals failed to meet their earnings target. By focusing on “irreversible decline” portfolio firms, this section no longer assumes that all portfolio firms with income decreasing discretionary accruals fail to meet their earnings targets. This section extends and refines the previous analysis by focusing solely on portfolio firms that fail to meet their earnings targets, *viz.* prior year reported earnings. This enables a more accurate examination of “big bath” and “reverse” myopic effects of transient and long-term oriented institutional ownership, respectively. Income smoothing effects compete with both the “big bath” and “reverse” myopic effects. Therefore, examining “big bath” and “reverse” myopic effects of transient and long-term oriented institutional ownership, respectively, concurrently examines the income smoothing effects of both transient and long-term oriented institutional ownership.

Furthermore, examining the effects of long-term oriented institutional investors on portfolio firms' discretionary accruals within the "irreversible decline" classification enables investigation of the portfolio firms' accruals management incentives created by long-term institutional investors, *within the limited accruals discretion available to portfolio firm managers.*

### 3.5.1 "Big bath" effects of transitory institutional investment?

Since "irreversible decline" firms can engage in either income increasing or income decreasing discretionary accruals,<sup>55</sup> they allow closer examination of which of the competing earnings management incentives (namely "big bath" *versus* income smoothing incentives) are created by transient institutional investors among portfolio firm managers. The "big bath" argument predicts that firms minimise reported earnings when they cannot meet their earnings targets (e.g., Healy, 1985; Fox, 1997; Loomis, 1999). Therefore, "irreversible decline" firms can take a bath in the current year to save current year accruals for future year(s). By taking a bath in the current year, a firm is likely to achieve two things. First, it can reset the earnings target for future years, leading to lower earnings targets for future years. Second, by delaying current year positive accruals into future years while moving forward future year negative accruals into the current year, a firm has more (less) positive (negative) accruals available in the future years, making it easier to meet its future earnings targets.

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<sup>55</sup> It should be noted that the "irreversible decline" categorisation includes both firms that incur positive or negative discretionary accruals, thus it differs from the treatment adopted in developing hypothesis 1a as per Section 2.3.1.

Based on the transient institutional investor argument, the big bath strategy is a feasible option for “irreversible decline” firms. When transient institutional investors systematically sell off their shareholdings in under-performing firms (based on their current earnings performance) regardless of the magnitude of the short-fall, then managers of portfolio firms have incentives to take a bath whenever their earnings targets cannot be met through accruals management. This is consistent with the unforgiving culture of capital markets punishing firms that fail to meet their earnings targets (e.g., Fox, 1997, Levitt, 1998, Loomis, 1999). By virtue of portfolio firms’ failure to meet their earnings targets, transient institutional investors would off-load shareholdings in these portfolio firms, with the associated consequences as detailed in the preceding chapter. The presence of transient institutional investors among “irreversible decline” portfolio firms is expected to further enhance the incentives for managers of these firms to take a bath. As such, within “irreversible decline” firms, a negative association between transient institutional ownership and discretionary accruals is expected.

It may be argued that even though portfolio firms are unable to meet their earnings targets, their managers still have incentives to incur positive discretionary accruals in order to be as close to the target as possible to minimise the negative effects of failing to meet their earnings targets. This income smoothing argument implies findings similar to those found by Gaver, Gaver and Austin (1995).<sup>56</sup> The practice of income smoothing among public firms is common and has even been proclaimed by a prominent FORTUNE 500 CEO as “the number 1 job of management” (Loomis,

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<sup>56</sup> In particular, Gaver et al. (1995) find that managers select income increasing discretionary accruals when their non-discretionary earnings fall below the lower bound of their bonus plans. They attribute this result as being consistent with income smoothing. This is in contrast to Healy (1985) who finds managers select income decreasing accruals under the same environment, as predicted by “big bath” arguments.



1999). The income smoothing hypothesis would predict a positive relation between transient institutional ownership and discretionary accruals of “irreversible decline” firms,<sup>57</sup> in direct contrast to the “big bath” prediction above.

Given the anecdotal evidence of the negative market sentiments attached to missing earnings targets (see e.g., Levitt, 1998; Fox, 1997), and consistent with the “big bath” arguments, this study expects that:

**H5: *Transient institutional ownership in “irreversible decline” firms is***

***NEGATIVELY associated with these portfolio firms’ discretionary accruals.***

### **3.5.2 “Reverse” myopia: undesirable effects of long-term oriented institutional ownership?**

Examination of the association between long-term oriented institutional ownership and “irreversible decline” firms’ discretionary accruals enables investigations of whether long-term oriented institutional investors create incentives for portfolio firm managers to manage accruals, *within the accruals discretion available to portfolio firm managers.*

Rajgopal and Venkatachalam (1998) find that institutional ownership, *as a whole*, is associated with more income decreasing discretionary accruals (i.e., negative discretionary accruals) after controlling for other factors affecting discretionary

<sup>57</sup>

Income smoothing behaviour is further investigated in Section 3.6.1.

accruals.<sup>58</sup> They conclude that these results are inconsistent with the transient institutional investor arguments. An alternative interpretation of this finding is that institutional investors, *as a whole*, create incentives for managers of portfolio firms to engage in overtly conservative accruals management akin to the “big bath” effect, through their monitoring activities.<sup>59</sup> However, given that Rajgopal and Venkatachalam (1998) did not distinguish between the different types of institutional ownership, it is difficult to reach an unambiguous interpretation of their findings. For example, institutional ownership, *as a whole*, associated with more income decreasing discretionary accruals can be interpreted as either consistent with “big bath” behaviour induced by transient institutional ownership or consistent with long-term oriented institutional ownership inducing a conservative accruals management behaviour (“reverse” myopia) on portfolio firm managers’ part, or a combination of both.

Furthermore, Rajgopal and Venkatachalam (1998) also find that institutional ownership, *as a whole*, is negatively associated with the absolute value of discretionary accruals. These two findings of Rajgopal and Venkatachalam (1998) indicate that long-term oriented institutional investors may have different influences

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<sup>58</sup> This negative association between institutional ownership as a whole and income decreasing discretionary accruals is not found by this study (see Table 6.5). The differences might be due to the different sample periods of the two studies. In particular, the sample periods of Rajgopal and Venkatachalam (1998) span from 1989 to 1995 inclusive. In contrast, the sample periods of this study are from 1995 to 1998 inclusive. Thus, the two studies only overlapped in 1995. Furthermore, this study’s sample excludes loss-making firms which are more likely to have income decreasing discretionary accruals.

<sup>59</sup> This study refers to such conservative accruals management as “reverse” myopic behaviour because it involves managers of portfolio firms focusing on managing reported earnings over a short-term *via* discretionary accruals. Conservative accruals management in this study refers to the adoption of less income increasing or more income decreasing discretionary accruals strategy than otherwise. This is consistent with the conservatism concept stipulated by Statement of Financial Accounting Concepts (SFAC) No.2 (FASB, 1980) and Basu (1997). The difference between “reverse” myopia and myopia in its traditional form is that the former involves managing earnings downwards whilst the latter involves managing earnings upwards. Given that “big bath” and “reverse” myopia both lead to the same outcome, this study does not attempt to distinguish the two hypotheses. “Reverse” myopia in this case can also be seen as a conservative bias.

on their portfolio firms' earnings management under different circumstances. Under general circumstances, long-term oriented institutional ownership can have an overarching effect of reducing managerial discretion over accruals management, through their monitoring activities (see hypotheses 2 and 2a, and Rajgopal and Venkatachalam (1998)). However, long-term oriented institutional ownership may also lead to a different accruals management strategy, *exercised within limited discretion*, adopted by portfolio firms under specific circumstances.

The fact that “irreversible decline” firms include firms that engage in both income increasing and income decreasing discretionary accruals enables an examination of other effects of long-term oriented institutional investors on portfolio firms' earnings management strategies in addition to the overarching effects of long-term oriented institutional investors in constraining portfolio firms' earnings management as predicted in the preceding chapter. Examining the association of long-term oriented institutional ownership with “irreversible decline” firms can help to isolate situations where incidents of “reverse” myopic behaviour among portfolio firms might occur, thus providing greater insight into the results found by Rajgopal and Venkatachalam (1998).

“Reverse” myopia is inconsistent with the argument that long-term oriented institutional investors constrain managerial earnings management as posited by the existing literature (e.g., Black, 1992; Bushee, 1998; Shleifer and Vishny, 1997). There is no known theory that explains or predicts the association between “reverse” myopic behaviour and long-term oriented institutional ownership. Therefore, the explanation and prediction for such behaviour forwarded by this study are purely exploratory in nature.

Similar to the “big bath” argument, “reverse” myopia may occur when managers of portfolio firms have strong incentives to create accounting slack for future periods, within the limited discretion available to them.<sup>60</sup> Such incentives are created when firms are unable to avoid missing their earnings targets, as is the case for “irreversible decline” firms.

Potential reasons why long-term oriented institutional investors might systematically motivate conservative accounting treatments among “irreversible decline” firms can be found by examining the effects of “reverse” myopic accruals management. The first effect is that future earnings targets are reset to a lower level, and the second effect is that more (less) positive (negative) accruals are available in the future years, making it easier to meet future earnings targets. Long-term oriented institutional investors might prefer these outcomes because as their portfolio firms are able to meet the earnings targets in future years, long-term oriented institutional investors are able to enjoy any benefits associated with meeting those earnings targets. These benefits include capital appreciation through capital markets paying a premium on firm value (e.g., Barth et al., 1999), or increases in dividend payouts as a result of improving earnings levels in the future periods. It is conceivable that long-term oriented institutional investors can communicate such preferences to portfolio firm managers through their involvement in the portfolio firm’s governance.

If long-term oriented institutional investors’ involvement in portfolio firms’ corporate governance leads to conservative accounting treatments, then their presence among “irreversible decline” firms provides stronger incentives for

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<sup>60</sup> However, dissimilar to “big bath” behaviour, “reverse” myopic accruals management is not restricted to negative discretionary accruals. Given that “reverse” myopia is similar to conservative accruals management, it encompasses *more* negative as well as *less* positive discretionary accruals to create accounting slack for future periods.

managers of portfolio firms to engage in conservative discretionary accruals management than “irreversible decline” firms without long-term oriented institutional investors. Therefore, the “reverse” myopia hypothesis predicts a negative association between long-term oriented institutional ownership and the discretionary accruals of “irreversible decline” firms.<sup>61</sup>

**H6: Long-term oriented institutional ownership in “irreversible decline” firms is *NEGATIVELY* associated with these portfolio firms’ discretionary accruals.**

In contrast to the “reverse” myopia hypothesis, an income smoothing hypothesis would predict that even though “irreversible decline” firms are unable to meet their earnings targets, long-term oriented institutional investors might still prefer an earnings trend that is closer to the earnings targets. However, smoothing income by “irreversible decline” firms in the current period may lead to failure to meet earnings targets in the subsequent period(s). This may occur especially if these firms need not only to use up all positive accruals in the current period but also to borrow future periods positive accruals. A positive relation between long-term oriented institutional ownership and the discretionary accruals of “irreversible decline” firms would be consistent with the income smoothing hypothesis.

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<sup>61</sup> Given that “big bath” and “reverse” myopic behaviours lead to the same prediction of a negative association between long-term oriented institutional ownership and “irreversible decline” firms’ discretionary accruals, evidence supporting this negative association can be attributable to either of these hypotheses. That is, the tests of the relation between long-term oriented institutional ownership and discretionary accruals using the “irreversible decline” sub-sample cannot distinguish unambiguously whether the negative relation, if found, is due to “reverse” myopia or “big bath” strategy. A negative relation, if found, supports the basic thesis of H6 that although long-term oriented institutional investors in general limit managerial discretion over accruals, their presence also leads to different behaviour under specific circumstances. Moreover, both “big bath” and “reverse” myopia arguments are very similar, thus this study does not attempt to distinguish between the two.

### ***3.6 Institutional ownership type effects on discretionary accruals amongst***

#### ***“increased” firms***

The last category of portfolio firms consists of firms with current year non-discretionary earnings (NDE) that already exceed their earnings target, namely, prior year reported earnings. Firms in this category can achieve their current year earnings target (i.e., maintain their prior year reported earnings level) even without managing their accruals. Since “increased” portfolio firms will at least maintain their prior year earnings level in the current year, institutional ownership is generally not expected to have any significant influence on portfolio firms’ accruals management strategies, regardless of the composition of institutional ownership in the portfolio firms.

Due to their short-term orientation, transient institutional investors create strong incentives for portfolio firm managers to manage reported earnings to meet earnings targets. However, such incentives are unlikely to be present where “increased” portfolio firms have already met their earnings targets before earnings management. Therefore, transient institutional ownership is NOT expected to be associated with discretionary accruals of “increased” portfolio firms. Similarly, the overarching effects of long-term oriented institutional investors are that, through their monitoring activities, portfolio firm managers’ accruals discretion is restricted. In the context of “increased” portfolio firms where these firms have already met their earnings targets, long-term oriented institutional investors are NOT expected to be associated with “increased” portfolio firms’ discretionary accruals.

Therefore, this thesis predicts that there is no association between institutional ownership (for either transient or long-term oriented institutional investors) and discretionary accruals for firms within this category.<sup>62</sup> Given the “no effect” predictions, no formal hypothesis is forwarded although tests are conducted to provide descriptive comparisons.

### 3.6.1 Examination of income smoothing behaviour

If managers of “increased” (IN) portfolio firms take a multiple period timeframe in making their earnings management decisions, then they can choose to “save” current year accruals for future periods through one of three approaches. First, portfolio firm managers can choose not to engage in any discretionary accruals management. Second, they can engage in minimum *positive* discretionary accruals to indicate “growth” in earnings - in addition to any growth arising from current year non-discretionary earnings (NDE) greater than prior year earnings. Third, they can choose to employ negative discretionary accruals if unfavourable circumstances are foreseen for the immediate future periods.

There are potential costs associated with earnings decreases, such as downward share price pressure resulting from a block sell off of shares and loss of share price premium when an earnings growth string is broken, as discussed in Chapter 2. Also, there are incentives for managers to avoid earnings decreases, such as a reduction in compensation. Hence, it is unlikely that “increased” portfolio firms will employ

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<sup>62</sup> Carlson and Bathala (1997) find that institutional ownership, *as a whole*, is positively associated with the probability of a firm being an income smoother. Income smoothing behaviour is further investigated later, among “increased” firms that reported an increase in current year earnings.

negative discretionary accruals management to the extent that they produce a decrease in current year reported earnings.<sup>63</sup>

Although both types of institutional ownership generally are not expected to affect “increased” firms’ discretionary accruals, further partitioning of the “increased” portfolio firms provides a unique category to examine specific incentives created by different types of institutional investors on portfolio firm managers’ accruals management decisions. Since “increased” firms have current year non-discretionary earnings greater than prior year earnings, they potentially include both firms that eventually report an increase in current year earnings compared to last year’s earnings and those reporting a decrease.<sup>64</sup> Given that incentives to meet earnings targets no longer exist for “increased” firms that reported an increase in current year earnings (both prior to and after accruals management), these firms provide a sample that is conducive to examining whether institutional investor type creates incentives for their portfolio firm managers to smooth reported earnings.<sup>65</sup>

Income smoothing represents an attempt by firm managers to reduce reported earnings variation and to increase the predictability of reported earnings trends (e.g.,

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<sup>63</sup> If an “increased” portfolio firm chose to engage in negative discretionary accruals management to the extent that results in a decrease in current reported earnings, then this firm represents an exception to the prediction and an exception to the theoretical frameworks and empirical findings of recent studies such as Barth et al. (1999), Burgstahler and Dichev (1997), Degeorge et al. (1999) and Myers and Skinner (1999).

<sup>64</sup> As discussed above, “increased” firms that engaged in negative discretionary accruals to the extent that they report a decrease in current year earnings represent an exception to the theoretical frameworks and empirical findings of recent studies. Therefore, although a sub-sample including “increased” firms with a decrease in current year earnings enables a closer examination of the characteristics of firms that engaged in negative discretionary accruals to the extent that they report a decrease in reported earnings even though their non-discretionary earnings already exceeded their earnings targets, it is not expected that there are many firms that would be in this position. Furthermore, there is no clear theoretical ground to predict the relation between the types of institutional ownership and discretionary accruals among “increased” firms with a decrease in current year reported earnings. Therefore, no specific hypothesis is developed. Subsequent result analysis reveals that a small number of “increased” firms reported a decrease in current year earnings (n=390).

<sup>65</sup> See also discussions in Section 3.4.



Carlson and Bathala, 1997; DeFond and Park, 1997; Ronen and Sadan, 1981; Trueman and Titman, 1988).<sup>66</sup> Meeting earnings targets through earnings management and reporting smooth and predictable earnings are used to satisfy investors (e.g., Fox, 1997; Levitt, 1998; Loomis, 1999).<sup>67</sup> The practices of *continuously meeting* earnings targets over a long period of time are so common among public firms that the immediate past Chairman of the SEC, Mr. Arthur Levitt, has publicly criticised such practices several times, and he launched an SEC crack-down on corporate earnings management (e.g., Levitt, 1998; Loomis, 1999).<sup>68</sup>

Using the transient institutional investor arguments, Carlson and Bathala (1997) predict and find that institutional ownership, *as a whole*, is positively related to the probability of a firm being an income smoother.<sup>69</sup> However, given that they do not segregate transient institutional ownership from long-term oriented institutional ownership, it is difficult to unambiguously conclude that transient institutional investors encourage portfolio firms to smooth income. Their results do not rule out the explanation that (a) high institutional ownership (regardless of the types of institutional ownership) is associated with the probability of income smoothing; or (b) only one type of institutional ownership is associated with the probability of income smoothing.

<sup>66</sup> See Ronen and Sadan (1981) for a detail discussion of issues involving smoothing earnings figures, including motivations for income smoothing, means of smoothing income, among others.

<sup>67</sup> A prominent FORTUNE 500 company CEO even proclaimed that "[t]he No.1 job of management is to smooth out earnings" (Loomis, 1999).

<sup>68</sup> Meeting earnings targets over a long period of time represents a more specific form of income smoothing than existing income smoothing studies (e.g., Carlson and Bathala, 1997; Moses, 1984; Ronen and Sadan, 1981). The existing income smoothing studies have generally defined income smoothing as a general reduction in deviation from earnings target regardless of *post*-managed earnings levels. In contrast, income smoothing that takes the form of meeting earnings targets over a long period of time takes into consideration (1) the capital market response to missing *versus* meeting earnings targets *post*-earnings management; (2) the impact on managerial compensation of missing earnings targets *post*-earnings management; and (3) the empirical evidence of firms avoid missing earnings targets.

<sup>69</sup> To provide a comparison for Carlson and Bathala (1997) findings, tests are carried out to investigate the relation between institutional ownership, as a whole, and the level of discretionary accruals among this group of firms, although no formal hypothesis is formed.

A more refined test of whether transient institutional investors create incentives for income smoothing can be performed within the category of “increased” firms which report an increase in current year reported earnings.<sup>70</sup> Since these firms have already achieved their earnings targets both prior to and after accruals management, their accruals management strategies can provide a clear indication of the existence of income smoothing incentives. If transient institutional investors create incentives for these portfolio firm managers to smooth reported earnings while meeting or exceeding earnings targets, then a negative relation between transient institutional ownership and the level of discretionary accruals is predicted.

As discussed at the beginning of this section, managers of “increased” firms have three major options with respect to their accruals management strategies: (1) no accruals management; (2) to incur positive discretionary accruals to indicate earnings growth in addition to the growth already achieved from non-discretionary earnings greater than last year’s reported earnings; and (3) to incur negative discretionary accruals. Given that this study assumes firms’ earnings targets are last year’s reported earnings (i.e., managers of portfolio firms seek to avoid earnings decreases), adoption of the third option is consistent with income smoothing as it brings the *post*-managed earnings levels closer to the earnings target than *pre*-managed earnings levels while still meeting or exceeding earnings targets. The partitioning of “increased” firms with increased reported earnings is likely to include portfolio firms that engage in any of these three options. A significant negative relation between

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<sup>70</sup> Since this study classifies institutional ownership into transient and long-term oriented ownership, it can separately tests whether these two types of institutional ownership individually encourage income smoothing behaviour.

transient institutional ownership and discretionary accruals among these firms provides strong evidence supporting income smoothing behaviour.<sup>71</sup>

**H7: *Transient institutional ownership in “increased” firms with an increase in current year earnings is NEGATIVELY associated with these portfolio firms’ discretionary accruals.***

Long-term oriented institutional investors are assumed to be concerned about the long-term economic fundamentals of their portfolio firms, and they are expected to constrain potential undesirable earnings management behaviour by portfolio firm managers. If long-term oriented institutional investors truly focus on the *economic fundamentals* of their portfolio firms, then they are not expected to create incentives for portfolio firm managers to smooth their reported earnings.<sup>72</sup> This is because long-term oriented institutional investors are informed investors who monitor their portfolio firms and are likely to rely on information in addition to earnings to assess portfolio firm managers’ performance.

It is possible that even though long-term oriented institutional investors are generally concerned about the long-term prospects of their portfolio firms, they may also prefer a smooth earnings trend that continuously meets earnings targets for one or more of the following reasons. Since long-term oriented institutional investors hold their investment over a longer time horizon, any premium on firm value resulting

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<sup>71</sup> The predicted negative relation between transient institutional ownership and discretionary accruals is further tested by including only “increased” firms with increased current year earnings that have negative discretionary accruals. This additional test enables examination of whether transient institutional ownership encourages income smoothing among “increased” firms with increased current year earnings that have negative discretionary accruals. It should be noted this additional test provides weaker test of the income smoothing hypothesis than if all “increased” firms with increased current year earnings are used (the main test for H7).

<sup>72</sup> This does not preclude managers of portfolio firms from smoothing their reported earnings in response to other factors.

from *continuously meeting* earnings targets generates unrealised capital appreciation. Furthermore, dividend payments to the long-term oriented institutional investors by portfolio firms with smooth earnings trends are more predictable. The unrealised capital appreciation and predictable dividend income will in turn reflect more favourably on these long-term oriented institutional investors' own performance.

Thus, if long-term oriented institutional ownership encourages income smoothing behaviour among portfolio firms within this partition, then a negative relation is expected between long-term oriented institutional ownership and the level of discretionary accruals of "increased" firms with an increase in current year reported earnings. Using firms that potentially have incentives and capacity to smooth income (i.e., firms that meet their earnings targets both prior to and after accruals management), the impact of long-term oriented institutional ownership on portfolio firms' accruals management can be investigated to identify situations where long-term oriented institutional investors might exert pressure for portfolio firm managers to manage discretionary accrual in a particular manner. A negative relation between long-term oriented institutional ownership and the level of discretionary accruals would provide evidence suggesting that although long-term oriented institutional investors limit portfolio firm managers' discretion over accruals management, their presence does create incentives for portfolio firm managers to smooth reported income. A negative relation also suggests that the findings in Carlson and Bathala (1997) cannot be solely explained by the transient institutional investor arguments. An income smoothing hypothesis predicts:

**H8: Long-term oriented institutional ownership in “increased” firms with an increase in current year reported earnings is *NEGATIVELY* associated with these portfolio firms’ discretionary accruals.**

### **3.7 Summary and conclusion**

This chapter extends the analysis in Chapter 2. In particular, this chapter examines the association between different types of institutional ownership and portfolio firms’ discretionary accruals, with specific reference to portfolio firms’ earnings targets. Existing literature suggests that managers have strong incentives to manage earnings first to avoid reporting losses, then to avoid earnings decreases, and finally to meet analysts’ forecasts (e.g., Burgstahler and Dichev, 1997; Degeorge et al., 1999; Myers and Skinner, 1999). This study assumes that sustaining prior year reported earnings levels is the earnings target. Firms are then categorised into three groups based on their level of non-discretionary earnings relative to their earnings targets. This categorisation of firms provides groupings that are conducive for analysing (a) the myopic, “big bath” and income smoothing effects of transient institutional ownership; and (b) the “reverse” myopic, and income smoothing effects of long-term oriented institutional ownership which have not been investigated by prior studies. By explicitly examining the complexities in the relation between types of institutional ownership and discretionary accruals, this thesis diverges from the extant literature’s general treatment of this relationship, and can extend current understanding on this issue.

Chapter 4 discusses the institutional investor classification methodology, developed by Bushee (2001), which is employed by this study. Chapter 5 describes the research design used to test the hypotheses developed in this chapter and Chapter 2. It includes discussion of the discretionary accruals measure and control variables to account for other factors that affect portfolio firm managers' discretionary accrual decisions.

## 4 Classification of Institutional Investors

### 4.1 Introduction

This chapter describes the methodology and process of institutional investor classification. As defined earlier, institutional investors are large investors, other than natural persons, who exercise discretion over the investments of others (Lang and McNichols, 1997). This definition is consistent with the SEC Rule 13(f) definition of institutional investors as entities, other than natural persons, with investment discretion over equity securities of at least \$100 million. Institutional investors in this study include only institutions that file the 13F form with the SEC, 13F institutions. Examples of 13F institutions are banks, insurance companies, corporate and private pension funds, investment advisers or companies, universities and private foundation endowments.

In this study, the classification technique developed by Bushee (2001) is used to classify institutional investors into transient investors, dedicated investors and quasi-indexers based on institutional investors' portfolio management characteristics.<sup>73</sup> Long-term oriented institutional investors are classified to include both dedicated and quasi-indexer institutional investors since both hold their investment as a long-term strategy rather than for short-term trade. Section 4.2 describes the specific portfolio management characteristics used in the institutional investors classification process (Bushee, 2001). Sections 4.3 and 4.4 respectively explain the factor analysis of these characteristics and the cluster analysis of institutions based on the outcome

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<sup>73</sup> Brian Bushee's advice on his classification scheme is gratefully acknowledged. The institutional investor classification scheme in Bushee (2001) is adopted as it represents a refinement of the institutional investor classification scheme first developed in Bushee (1998).

of the factor analysis. This is followed in Section 4.5 by a description of the institutional ownership measurements used in this study. Section 4.6 summarises and concludes the chapter.

## ***4.2 Institutional investor portfolio management characteristics***

The institutional investor classification technique developed by Bushee (2001) categorises institutional investors as transient investors, dedicated investors or quasi-indexers based on individual institutional investors' past portfolio management characteristics.<sup>74</sup> It involves three main steps. First, based on prior research, seven variables are constructed to capture institutions' past investment behaviour. Factor analysis is then performed on these variables to obtain the common factors that describe institutional investors' past portfolio management characteristics, specifically, portfolio diversification of each institutional investor (BLOCK) and portfolio turnover of each institutional investor (PTURN). Finally, cluster analysis is performed on the factor scores obtained in step 2 to classify institutional investors. The following discussions focus on the first step of the classification process. Sections 4.3 and 4.4 discuss the factor analysis and cluster analysis respectively.

In step one, seven variables are used to capture characteristics that reflect the choices the institutions have made in terms of portfolio diversification and portfolio turnover (Bushee, 2001). Transient institutional investors are expected to have high portfolio turnover with relatively high portfolio diversification. Dedicated institutional

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<sup>74</sup> This study does not attempt to improve on Bushee's classification technique, which is beyond the scope of this study. Rather, the technique is accepted as the best available. It adopts Bushee's variable acronyms as much as possible for ease of comparison. However, certain acronyms are modified to avoid confusion with other variables used in the hypothesis testing models.



investors, on the other hand, are expected to have low portfolio diversification and low turnover. Quasi-indexer institutions are expected to exhibit characteristics consistent with indexed, buy-and-hold strategies: relatively high diversification with low turnover.

Four variables are used to proxy for the level of portfolio diversification of each institution (see Table 4.1 for variable definitions). The first is the level of portfolio concentration (PFCONC) variable which measures the average percentage of an institution's total equity holdings invested in each portfolio firm. Specifically, PFCONC is calculated as an institution's total equity investment divided by the total number of the institution's portfolio firms. The average percentage holding (APH) measures the average size of the institutional investor's ownership position in its portfolio firms. It is calculated as the sum of the size of an institution investment in individual portfolio firms divided by the institution's total equity investment. Two large block holding variables attempt to capture the percentage of an institutional investor's investment in portfolio firms in which it has an influential ownership position. In particular, the percentage of total holdings held in large blocks (LBPH) measures the percentage of an institutional investor's *investment* in firms where it has greater than 5 percent ownership, calculated as the sum of an institution's large block equity investments (i.e., > 5% ownership) divided by its total equity investment. The percentage of portfolio firms held in large blocks (LBPF) measures the percentage of the institution's portfolio *firms* held in large blocks (i.e., > 5% ownership), calculated as the number of firms in which an institution has greater than 5% ownership divided by the total number of the institution's portfolio firms.

**Table 4.1: Institutional Investor Portfolio Management Characteristics\***

Variable	Definition
Portfolio concentration (PFCONC)	$\Sigma w_{iq} / NSTK_q$
Average percentage holding (APH)	$(\Sigma w_{iq} PH_{iq}) / \Sigma w_{iq}$
Percentage of total holdings held in large blocks (LBPH)	$(\Sigma w_{iq} LB_{iq}) / \Sigma w_{iq}$
Percentage of portfolio firms held in large blocks (LBPF)	$NLB_q / NSTK_q$
Percentage of total holdings held continuously for two years (STAB1)	$(\Sigma w_{iq} LT_{iq}) / \Sigma w_{iq}$
Percentage of portfolio firms held continuously for two years (STAB2)	$NLT_q / NSTK_q$
Portfolio turnover (PT)	$\Sigma  \Delta w_{iq}  / (\Sigma w_{iq} + \Sigma w_{i,q-1})$

$NSTK_q$  = number of portfolio firms whose stock is owned by institutional investor at the end of quarter  $q$

$w_{iq}$  = portfolio weight (shares held times stock price) in firm  $i$  at the end of quarter  $q$

$\Delta w_{iq}$  =  $\Sigma w_{iq} - \Sigma w_{i,q-1}$

$PH_{iq}$  = percentage of total shares in firm  $i$  held by institutional investor at the end of quarter  $q$

$LB_{iq}$  = 1 if  $PH_{iq} > 0.05$ ; 0 otherwise

$NLB_q$  = number of stock with greater than 5% ownership at the end of quarter  $q$

$LT_{iq}$  = 1 if institutional investor held firm  $i$  continuously for the prior eight quarters; 0 otherwise

$NLT_q$  = number of stock with held continuously for the prior eight quarters

\* The characteristics are calculated at the end of each calendar quarter for every institution on the Spectrum database. The quarterly values are averaged over all quarters available for the calendar year to get end-of-year average values of each characteristic for each institution. These average annual values are used in the subsequent factor and cluster analyses.

The degree of portfolio turnover is captured by three variables. The first is the portfolio turnover (PT) variable which measures the institutional investor's average absolute change in its ownership positions in its portfolio firms over a quarter divided by the total ownership position of the institutional investor over the same quarter. The other two variables measure the relative stability of the institutional investor's holding in its portfolio firms. Percentage of total holdings held continuously for two years (STAB1) is calculated as an institution's *investment* in portfolio firms continuously held for the prior two years divided by its total equity investment. Percentage of portfolio firms held continuously for two years (STAB2), on the other hand, is calculated as the *number of firms* an institution has held continuously for the past two years divided by its total number of portfolio firms.

The above seven variables are constructed for all the institutional investors that are included in the Spectrum database from 1994-1998, inclusive.<sup>75</sup> The Spectrum database comprises all institutions that filed the 13F form with the SEC.

### 4.3 *Factor analysis*

Given the nature of the selection and construction of the variables identified in the preceding section, these portfolio management characteristic variables are highly correlated with each other, making it difficult to draw conclusions based on a single variable or to include multiple variables in the same analysis. To mitigate this problem, Bushee (2001) performs a factor analysis on these variables. Factor

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<sup>75</sup> Institutional ownership information is restricted to between 1994-1998 due to the high cost in obtaining the Spectrum database for any additional period(s).

analysis is a statistical technique used to identify a relatively small number of common factors that can be used to represent relationships among sets of interrelated variables. The main portfolio management characteristics, namely, portfolio diversification (BLOCK) and portfolio turnover (PTURN), are identified *via* principal factor analysis with an oblique rotation. Standardised factor scores are then calculated for subsequent cluster analysis.

Table 4.2 summaries the results of the factor analysis. The BLOCK factor captures the level of portfolio diversification of an institution. As expected, LBPH, LBPF, APH and PFCNC load positively on the BLOCK factor. That is, high (low) BLOCK factor scores characterise institutions having a larger (smaller) average investment size in their portfolio firms. Therefore, a high (low) BLOCK score indicates an institution holds a less (more) diversified portfolio.

On the other hand, the PTURN factor measures the institution's portfolio turnover. Consistent with expectations, STAB1 and STAB2 load negatively on the PTURN factor while PT loads positively on PTURN factor. That is, institutions that trade more (less) frequently are associated with high (low) PTURN factors scores, and are less (more) likely to hold their portfolio firms continuously for two years.

**Table 4.2: Factor Analysis of Institutional Investor Portfolio Management Characteristics**

Variable	Factors	
	BLOCK	PTURN
LBPH	0.9405	0.0025
LBPf	0.8781	0.0595
APH	0.8127	-0.0174
PfCONC	0.4018	-0.1031
STAB1	0.0240	-0.9555
STAB2	0.0089	-0.9521
PT	-0.0091	0.7481
Variance Explained	36.24%	33.38%

- LBPH = the percentage of the institution's total holdings held in large blocks (greater than 5%)
- LBPf = the percentage of the institution's portfolio firms held in large blocks (greater than 5%)
- APH = the institution's average percentage ownership in its portfolio firms
- PfCONC = the institution's average investment size in its portfolio firms
- STAB1 = the percentage of the institution's total holdings held continuously for two years
- STAB2 = the percentage of the institution's portfolio firms held continuously for two years
- PT = the institution's portfolio turnover percentage
- BLOCK = Portfolio Diversification Factor
- PTURN = Portfolio Turnover Factor

#### 4.4 *Cluster analysis*

A cluster analysis performed on the factor scores enables the final classification of institutions into the three groupings, namely transient, dedicated, and quasi-indexer institutions. Cluster analysis is a statistical technique for grouping observations into clusters so that institutions within the same cluster are more similar among themselves than institutions in other clusters. Transient institutional investors are characterised as having high portfolio turnover in conjunction with highly diversified portfolio holdings (Bushee, 2001; 1998). Quasi-indexers and dedicated institutional investors provide stable, long-term ownership in investee firms as they focus more on the long-term prospects of investee firms. Dedicated institutional investors are characterised as having highly concentrated portfolios, and low portfolio turnover (Bushee, 2001; 1998). Finally, highly diversified portfolio holdings and low portfolio turnover, consistent with buy-and-hold, passive index investment strategies, characterise quasi-indexers (Bushee, 2001; 1998).

Table 4.3 reports the outcome of the cluster analysis performed on the factor scores derived from the factor analysis described in the preceding section. Based on the mean standardised factor scores, transient institutional investors (TRA) hold a highly diversified portfolio (low BLOCK factor) and have the highest portfolio turnover (high PTURN factor). Dedicated institutional investors (DED) have highly concentrated portfolio holdings (high BLOCK factor) associated with low portfolio turnover. Consistent with passive index strategies, quasi-indexer institutional investors (QIX) have low portfolio turnover and diversified holdings.

**Table 4.3: Cluster Analysis of Institutional Investor Portfolio Management Characteristics**

Factor Score		Clusters (Institutional Investor Groups)		
		TRA	DED	QIX
BLOCK	Mean	-0.2498	2.1202	-0.1854
	Std. Dev.	0.2993	0.7331	0.3605
PTURN	Mean	0.7992	0.0953	-0.9805
	Std. Dev.	0.4662	0.9523	0.4749
N		3097	454	2568
% of total N		50.61%	7.42%	41.97%

TRA = transient institutional investors  
 DED = dedicated institutional investors  
 QIX = quasi-indexer institutional investors  
 BLOCK = Portfolio Diversification Factor  
 PTURN = Portfolio Turnover Factor

Transient institutions make up 50.61% of the institution-year during the period of 1995-1998, inclusive. On the other hand, dedicated and quasi-indexer institutions make up 7.42% and 41.97% of the sample institution-year, respectively. The proportion of institution-year in each group is different from that reported in Bushee (1998) and Bushee (2001). However, the distributions from these three studies are not directly comparable as the sample periods are between 1981-1994, 1980-1997 and 1995-1998, inclusive, for Bushee (1998), Bushee (2001) and this study respectively. It is conceivable that the distribution of these three types of institutional investors varies over time. For example, the growth in recent concerns about, and criticisms of, the short-term orientation of institutional investment provides anecdotal evidence of the growth of transitory institutional investment over

the years. This is consistent with the growth in the relative proportion of transient investors to the other two types of institutional investors from 43.2% in 1995 to 54.6% in 1998 (not tabled). Overall, the relative distribution of institutions across the groups is consistent with Porter's (1992) argument that institutions are more likely to have small, highly diversified ownership in firms and/or turnover their positions frequently.

#### ***4.5 Measuring institutional ownership***

This section details the variables used to measure institutional share ownership. The percentage of institutional ownership (PISH) is calculated as the total number of shares held by 13F institutional investors (as defined in the introduction section of this chapter) divided by total number of shares outstanding at the end of the fourth quarter. The percentages of ownership by transient institutional investors (TRA) and by long-term oriented institutional investors (LTPISH) are calculated, respectively, as the total number of shares held by transient and long-term oriented institutional investors divided by the total number of shares outstanding in the portfolio firm. Long-term oriented institutional investors include both institutions that are classified as dedicated and quasi-indexer institutional investors in the preceding sections. Quasi-indexers are included because, as discussed in Chapter 2, these investors are considered to be long-term oriented in their shareholdings as they cannot trade solely on the basis of current earnings performance.

Existing literature has generally ignored the effects of concurrent equity ownership by both transient and long-term oriented institutional investors on earnings



management.<sup>76</sup> However, it is very likely that these two types of institutional investors both have investments in the same firms. This study relaxes the mutual exclusivity assumption implicit to the extant literature and extends Bushee's (1998) treatment by considering the relative ownership stakes of these two types of institutional investor. The relative ownership position of transient and long-term oriented institutional investors within portfolio firms is used to account for the effects of the joint presence of both types of institutional investors on portfolio firms' discretionary accruals. TRARELPISH is a measure of transient institutional ownership relative to total institutional ownership, which is calculated as  $TRA/PISH$ .<sup>77</sup>

A summary of the institutional ownership measures is presented in Table 4.4.

**Table 4.4: Institutional Ownership Measures**

Variable	Definition
Percentage of institutional ownership (PISH)	$IO_i / TOS_i$
Transient institutional ownership (TRA)	$TIO_i / TOS_i$
Long-term oriented institutional ownership (LTPISH)	$LTIO_i / TOS_i$
Relative institutional ownership (TRARELPISH)	$TRA / PISH$

$IO_i$  = total number of shares owned by institutional investors in firm i

$TOS_i$  = total number of ordinary shares outstanding of firm i

$TIO_i$  = total number of shares owned by transient institutional investors in firm i

$LTIO_i$  = total number of shares owned by long-term oriented institutional investors in firm i

<sup>76</sup> Bushee (1998) is the only known exception to this treatment in the literature, where the ownership stake of different types of institutional investor is explicitly considered using indicator variables. This study differs from Bushee (1998) by using a continuous measure of relative institutional ownership by the two types of institutional investors.

<sup>77</sup> A measure of long-term oriented institutional ownership relative to total institutional ownership is not introduced because the measure  $TRA/PISH$  is equal to  $(1 - LTPISH/PISH)$ . Therefore,  $LTPISH/PISH$  is redundant when  $TRA/PISH$  is already introduced. Furthermore, inclusion of both  $TRA/PISH$  and  $LTPISH/PISH$  measures in a single regression leads to perfect multicollinearity in the regression.

#### **4.6 *Summary and conclusion***

This chapter describes the process of classifying institutional investors as transient, dedicated, or quasi-indexer institutional investors using the techniques developed by Bushee (2001). The chapter begins by discussing the variables constructed to capture institutional investors' portfolio management characteristics. Factor analysis of these variables is then performed to obtain the common factor scores to measure the level of institutional investors' portfolio diversification and portfolio turnover. A cluster analysis on the factor scores derived in the factor analysis completes the classification process. Section 4.5 discusses the various institutional ownership measures used in this study. Chapter 5 discusses the research design for testing the hypotheses developed in Chapters 2 and 3. Among other things, it discusses the accrual model used in estimating the discretionary accruals; other confounding factors that affect discretionary accruals; and hypothesis testing model specifications.

## 5 Research Design

### 5.1 Introduction

The previous chapter discusses how institutional investors are classified based on Bushee's (2001) classification scheme, as well as the various institutional ownership measures to be used in the hypothesis testing phase. This chapter describes the research design used to test the hypotheses generated in Chapters 2 and 3. Sample selection criteria are documented in Section 5.2, while Section 5.3 details the model used to obtain the proxy for discretionary accruals. In particular, Section 5.3 describes the discretionary accruals estimation process using the cross-sectional modified Jones model (see Dechow et al., 1995 and Bartov, Gul and Tsui, 2000). A discussion of the variables controlling for other confounding factors that affect discretionary accruals appears in Section 5.4. Section 5.5 specifies the models for hypothesis testing while Section 5.6 concludes the chapter.

### 5.2 Sample selection and test period

The sample comprises firm-year observations for non-finance related firms listed on Standard and Poor's Compustat from 1995 to 1998 inclusive, that do not change their financial year-end during the sample period ( $n = 16,641$ ).<sup>78</sup> The sample period is restricted to 1995-1998 due to the high cost of obtaining the Spectrum database for an extended period. Institutional ownership information is collected from the

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<sup>78</sup> Firms with primary SIC two-digit classification codes of 60 to 67 are regarded as finance related firms.

Spectrum Database which contains SEC Form 13F information. Furthermore, the test period is restricted to the post Financial Accounting Standards Board's FAS 95, *Statement of Cash Flows* period so that cash flows from operations, used in calculating total accruals (see variable definitions for equation (1) below) can be directly and consistently obtained using comparisons of earnings with companies' Statements of Cash Flows. This avoids measurement errors that may be introduced in using balance sheet data to estimate total accruals.

Collins and Hribar (1999) demonstrate that the balance sheet approach to accruals estimation introduces measurement errors into the discretionary accruals estimates derived from the modified Jones model, as used in this study.<sup>79</sup> The direction of the bias depends on the three nonarticulation problems they investigated: mergers and acquisitions (positive bias), divestitures (negative bias), and foreign currency translation (moderate negative bias). They also find that between 38.6% and 46.5% of their sample firms have one or more of these three events over the period between 1988 and 1997 inclusive.<sup>80</sup> Given that this study's and Collins and Hribar's (1999) sample periods overlap, measurement errors in accruals as found by Collins and Hribar (1999) can be avoided by using the cash flow approach in calculating accruals. The Financial Accounting Standards Board's FAS 95, *Statement of Cash Flows*, requires firms to prepare cash flow statements for fiscal years ending after July 15, 1988.

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<sup>79</sup> Examples of studies that used the balance sheet approach to estimate accruals include Jones (1991); Dechow et al. (1995), Teoh, Welch and Wong (1998a; 1998b), Teoh, Wong and Rao (1998), Kasznik (1999) and Cheng and Reitenga (2000).

<sup>80</sup> Furthermore, they find that balance sheet approach to total accruals computation introduces a measurement error of greater than 10% of earnings before extraordinary items in 78.4% of their sample firms. Although they do not provide measurement errors for discretionary accruals under the balance sheet approach, material measurement errors in discretionary accruals are likely to follow through from measurement errors in total accruals. In addition to the nonarticulation events, Collins and Hribar (1999) also find that there is a positive bias across all firms under the balance sheet approach.

Table 5.1 summarises the sample selection criteria of this study. Firms with insufficient data to estimate discretionary accruals ( $n = 2,345$ ) or to calculate independent variables ( $n = 1,661$ ) are excluded. The sample also excludes firms without institutional shareholding data on the Spectrum database ( $n = 3,865$ ). Firms in industries with less than ten observations in a year are excluded ( $n = 497$ ) to ensure some efficiency in accruals model estimation (Dechow et al., 1995; Jones, 1991; Teoh, Welch and Wong, 1998a; 1998b). These sample selection criteria generate a sample of 8,273 firm-year observations and 155 industry-years for the OLS estimations of the accruals model.

**Table 5.1: Sample Selection Criteria**

Criteria	No. of Firm-Years
Non-finance related Compustat firm-years 1995-1998	16,641
Less:	
Firms with insufficient data to estimate discretionary accruals	(2,345)
Firms with insufficient data to calculate independent variables	(1,661)
Missing Spectrum institutional shareholding data	(3,865)
Industry-year combinations with fewer than 10 observations	<u>(497)</u>
	8,273
Less: firms reporting losses	<u>(3,011)</u>
Final test sample	5,262
Sources: Compustat and Spectrum databases	

Degeorge et al. (1999) find that there is a hierarchical importance attached to firms' earnings targets. Examining three earnings targets, they find that the most important earnings target is to avoid losses. The second most important earnings target is to maintain prior period earnings levels and the least important earnings target of the three is to meet analysts' forecasts. Degeorge et al. (1999) conclude that the hierarchical importance of earnings targets suggests that firms will try to avoid reporting losses first before considering the other two earnings targets. If firms are reporting a profit, then these firms have cleared the most important of the three earnings targets examined by Degeorge et al. (1999), and their immediate earnings target will be to maintain prior year's earnings before considering meeting analysts' forecasts. Given that this study adopts the second threshold (i.e., maintaining prior period earnings level) as the earnings target, it is essential to ensure that all sample firms are reporting a profit such that the immediate earnings target for the sample firms is the prior year's earnings. Therefore, the final test sample is further reduced to exclude firms that reported a loss during the sample period ( $n = 3,011$ ). The final test sample consists of 5,262 firm-year observations.

The sample selection criteria suggest that the results found and conclusions drawn by this study may not be generalisable to loss-making firms and finance related firms.

### ***5.3 Measuring earnings management***

This study uses a measure of discretionary accruals to proxy for earnings management (see e.g., Kasznik, 1999; Rajgopal and Venkatachalam, 1998). In contrast, recent US studies investigating institutional ownership effects on earnings

management generally use R&D spending as a proxy for earnings management (e.g., Bange and De Bondt, 1998; Bushee, 1998; Majumdar and Nagarajan, 1997). Accruals manipulation represents first, a much less expensive manner to manage reported earnings than changing R&D investment from year to year. For example, if a cut in R&D investment is used as an earnings management tool to boost current reported earnings rather than as a result of strategic business planning, such reduction in R&D spending can jeopardise the firm's market competitiveness and thus its long-term viability.<sup>81</sup> Moreover, cutting R&D involves real cash flows and is readily observable by market participants. In addition, Lev and Sougiannis (1996) find that R&D expenditures are, in general, associated with greater subsequent earnings and R&D capital is positively associated with subsequent stock returns. Hence, market participants are likely to interpret a cut in R&D expenditure as a negative signal regarding firm value. Also, accruals manipulation is often less transparent than changing R&D expenses as there is no direct disclosure of most discretionary accruals or changes in accrual estimation methods.<sup>82</sup>

Changes in accruals (other than *via* accounting policy choices) are also less transparent to financial statement users than accounting policy changes since firms are required to disclose the nature and reasons for the change as well as to quantify the change (APB Opinion No. 20). Furthermore, accruals management incorporates a wide range of earnings management techniques available to managers when preparing financial statements (Fields, Lys and Vincent, 2001; Francis, 2000). Therefore, if managers have incentives to manipulate reported earnings, it is possible

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<sup>81</sup> The extent to which a cut in R&D spending affects a firm's market competitiveness depends on, *inter alia*, the nature of the project(s) being cut or discontinued, the number of periods in which cutting R&D spending is used as an earnings management tool rather than based on strategic business decisions.

<sup>82</sup> Some exceptions include disclosures relating to change in accounting policy and/or adoption of new accounting standards.

for them to select an earnings management technique that, relative to actual investment decisions and accounting policy choice, is subtler, less costly and less likely to be unravelled by outsiders. Finally, using accruals management as a proxy for earnings management enables generalisation of results to firms and/or industries that do not engage in research and development activities.

Given the above arguments, an accrual approach to examining the effects of institutional investors on managerial incentives to manage reported earnings is appropriate. It can provide stronger and more general indications of reporting behaviour than studies of changes in real investment policies or accounting policies only.

The time-series modified Jones model has been identified as the most powerful model for estimating discretionary accruals among the existing accruals models, although it is not without imprecision or flaws (Dechow et al., 1995; Bernard and Skinner, 1996; Guay, Kothari and Watts, 1996; Healy, 1996; Hansen, 1998, 1999; McNichols, 2000). Recent evidence suggests that the cross-sectional modified Jones model out performs its time-series counterpart in detecting accruals management (Bartov et al., 2000).<sup>83</sup> Accordingly, and consistent with recent studies, this study uses the cross-sectional variation of the modified Jones model (Dechow et al., 1995) to obtain a proxy for discretionary accruals (e.g., Subramanyam, 1996; Teoh, et al., 1998a, 1998b; Kasznik, 1999).

Compared to the time-series accruals model, the cross-sectional version has several advantages. First, it generates a larger sample size to facilitate hypothesis testing.

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<sup>83</sup> Peasnell, Pope and Young (2000) also find that the cross-sectional Jones and modified Jones models to be well specified and are capable of generating relatively powerful tests for accruals management, although their study focuses only on working capital accruals.



Second, the number of observations per model is greater for the cross-sectional model, which enhances the efficiency and precision of the estimates. Third, the time-series model suffers potential survivorship bias as it generally requires a minimum of 10 years of observations to achieve a reasonable level of estimation efficiency (Dechow et al., 1995; Jones, 1991, DeFond and Jiambalvo, 1994). Finally, given the lengthy time period required by the time-series model, it is possible for the model to be misspecified due to non-stationarity. However, the main disadvantage of the cross-sectional accruals model is that the coefficients are assumed to be the same for all firms within a particular two-digit SIC industry code and fiscal year combination.

The modified Jones discretionary accruals proxy for firm  $i$  in year  $t$  is obtained in three stages. First, coefficients  $\alpha_1$ ,  $\alpha_2$  and  $\alpha_3$  in equation (1) below are estimated for each industry (defined by two-digit SIC industry classification code) and fiscal year combination.

$$TACC_{i,t} = \alpha_1(1/A_{i,t-1}) + \alpha_2(\Delta REV_{i,t}/A_{i,t-1}) + \alpha_3(PPE_{i,t}/A_{i,t-1}) + \epsilon_{i,t} \quad (1)$$

Where:

$TACC_{i,t}$  = (Income before extraordinary items (item 123) – cash flows from operations (item 308))/ $A_{i,t-1}$

$A_{i,t-1}$  = Total assets for firm  $i$  in year  $t-1$  (item 6)

$\Delta REV_{i,t}$  = Change in operating revenue of firm  $i$  between years  $t$  and  $t-1$  (item 12)

$PPE_{i,t}$  = Gross property, plant and equipment of firm  $i$  in year  $t$  (item 7)

$\epsilon_{i,t}$  = error term

Table 5.2 provides the summary descriptive statistics for the 155 cross-sectional OLS estimations of the accruals model. Consistent with existing literature (e.g., Jones, 1991; Dechow et al, 1995; Kasznik, 1999; Bartov et al., 2000), the estimated

coefficients on change in revenue are generally positive while the estimated coefficients on gross property, plant and equipment are generally negative. The cross-sectional accruals model explains a significant portion of the variation in total accruals, as evident by the mean (median) adjusted  $R^2$  of 0.4207 (0.4334).

**Table 5.2: Descriptive Statistics for OLS Estimations of the Accruals Model**

$$TACC_{i,t} = \alpha_1(1/A_{i,t-1}) + \alpha_2(\Delta REV_{i,t}/A_{i,t-1}) + \alpha_3(PPE_{i,t}/A_{i,t-1}) + \varepsilon_{i,t}$$

	N*	Mean	Std. Dev.	Quartile 1	Median	Quartile 3
$a_1$	155	-0.2488	3.2049	-0.9689	-0.1110	0.5998
$t$ -statistic	155	-0.6252	2.9593	-1.9115	-0.3024	0.7313
$a_2$	155	0.0274	0.1685	-0.0302	0.0312	0.1287
$t$ -statistic	155	0.9546	3.5792	-0.6075	0.8741	2.6650
$a_3$	155	-0.0725	0.0833	-0.1119	-0.0693	-0.0374
$t$ -statistic	155	-2.8842	2.6514	-4.1018	-2.6853	-1.3685
No. of observations**	155	54.1871	62.8468	18.0000	32.0000	54.0000
$R^2$	155	0.4790	0.2553	0.2633	0.4816	0.6929
Adjusted $R^2$	155	0.4207	0.2785	0.2018	0.4334	0.6412

\* N is the number of industry-years over the sample period, 1995-1998.

\*\* This refers to the number of observations within each industry-year combination.

$TACC_{i,t}$  = (Income before extraordinary items (item 123) – cash flows from operations (item 308))/ $A_{i,t-1}$

$A_{i,t-1}$  = Total assets for firm  $i$  in year  $t-1$  (item 6)

$\Delta REV_{i,t}$  = Change in operating revenue of firm  $i$  between years  $t$  and  $t-1$  (item 12)

$PPE_{i,t}$  = Gross property, plant and equipment of firm  $i$  in year  $t$  (item 7)

$\varepsilon_{i,t}$  = error term

Second, using the estimated coefficients above, the non-discretionary accruals (NDACC) for firm  $i$  in year  $t$  are the fitted values based on the Dechow et al. (1995) modification of the Jones (1991) model (see e.g., Dechow et al., 1995; Teoh et al., 1998a, 1998b; and Bartov et al., 2000):

$$NDACC_{i,t} = \hat{\alpha}_1(1/A_{i,t-1}) + \hat{\alpha}_2(\{\Delta REV_{i,t} - \Delta REC_{i,t}\}/A_{i,t-1}) + \hat{\alpha}_3(PPE_{i,t}/A_{i,t-1}) \quad (2)$$

Where:

$\Delta REC_{i,t}$  = Change in net receivables of firm  $i$  between years  $t$  and  $t-1$  (item 151)

Finally, a discretionary accruals proxy (DACC) for earnings management, is obtained by taking the difference between non-discretionary accruals and total accruals.

$$DACC_{i,t} = TACC_{i,t} - NDACC_{i,t} \quad (3)$$

Income increasing discretionary accruals are captured by the variable  $DACC^+$  for  $DACC > 0$ . The variable  $DACC^-$  captures income decreasing discretionary accruals, where  $DACC < 0$ .

#### **5.4 Control variables**

Given that institutional ownership is unlikely to be the sole determinant of portfolio firm managers' discretionary accounting choices, several control variables are introduced to isolate other contracting incentives that have been found to influence

managers' discretionary accounting choices. Each of the control variables is discussed below.

Firm size has traditionally been associated with political costs (Watts and Zimmerman, 1978, 1986, 1990). The size hypothesis is based on the argument that larger firms attract greater political attention than smaller firms. Managers of large firms are deemed more likely to exploit latitude in accounting discretion to reduce this political attention, for example *via* income decreasing earnings management techniques. However, the association between firm size and discretionary accruals is ambiguous. The reason for the ambiguity is that although large firms have incentives to reduce political costs by reducing reported earnings, they are likely to be under closer scrutiny by outsiders, such as financial/investment analysts, auditors, or institutional shareholders, than are small firms. Such close scrutiny by outsiders can potentially reduce managers' opportunities to exercise their accounting discretion.<sup>84</sup> While the size measure is included to proxy for political exposure, it may reflect other factors.<sup>85</sup> This study uses the natural logarithm of the market value of equity (item 25 x item 199) as a proxy for firm size, SIZE.

Managers are more likely to exercise the accounting discretion granted by GAAP when they are closer to default on debt covenants (Press and Weintrop, 1990; Watts and Zimmerman, 1986). Further, Beneish and Press (1993, 1995) indicate that

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<sup>84</sup> In a recent study, Sloan (1996) finds the relation between size and total accruals to be non-linear. Specifically, they exhibit an inverted U shape association. Given that total accruals is positively correlated with discretionary accruals, it is likely that size and discretionary accruals exhibit the same non-linear relation. The effects of this potential non-linear relation between firm size and discretionary accruals are examined later as part of the robustness tests.

<sup>85</sup> See Ball and Foster (1982) for an early discussion of alternative interpretation of the size measure.

technical default on debt covenants is costly.<sup>86</sup> As such, it creates incentives for managers to prevent unnecessary technical violation of debt agreements *via* earnings management. Consequently, a positive relationship between discretionary accruals and leverage is predicted where the leverage ratio (LEV) is measured as the ratio of total debt (item 9 + item 34) to total assets (item 6).

Recent studies have found that firms manage earnings at the time of issuing equity to influence prospective investors' assessments about their performance and financial stability (e.g., Dechow et al., 1996; Rangan, 1998; Teoh et al., 1998a and 1998b). Firms' reported earnings are found to be unusually high at the time of equity issuance and these high reported earnings can be attributed to unusually high discretionary accruals. EQISS is introduced to control for managers' incentives to manage earnings at the time of issuing equity. It is measured as the amount of new equity issued (item 108) divided by the market value of equity (item 25 x item 199).

Skinner and Sloan (1999) document that growth stocks experience a disproportionately large negative stock price response to earnings disappointment (the 'torpedo' effect). That is, when growth stocks report a small earnings disappointment, it leads to large stock price declines. Based on this observation, Dechow, Richardson and Tuna (2000) argue and find that managers of high growth firms have incentives to manage earnings upward to avoid earnings disappointments. On the other hand, it is possible that managers of high growth firms faced with inevitable earnings disappointment have incentives to manage reported earnings downwards to create accounting slack for future periods. Consistent with Dechow et

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<sup>86</sup> Beneish and Press (1993) find that the average cost of technical violation ranges between 1.2% and 2% of the market value of the firm's equity; or losses of between 4.4% and 7.3% of the outstanding balances of the violated debt agreements.

al. (2000) the market-to-book ratio, MKTBV (calculated as the market value of equity (item 25 x item 199) divided by book value (item 216)), is used to capture the 'torpedo' effect.

In a recent study, Becker, DeFond, Jiambalvo and Subramanyam (1998) investigate the relation between auditor quality (proxied by Big 6 auditors) and earnings management (proxied by discretionary accruals). They find that clients of non-Big 6 (now, non-Big 5) auditors report discretionary accruals that are, on average, 1.5-2.1% of total assets higher than the discretionary accruals reported by clients of Big 6 auditors. Further, lower audit quality is also found to be associated with a greater level of "accounting flexibility". Therefore, a dichotomous variable, AUD (1 when a firm is audited by a Big 6 auditor; 0 otherwise), is used to control for the effect of auditor quality on discretionary accruals. Consistent with Becker et al. (1998), auditor quality is expected to be negatively associated with discretionary accruals. Furthermore, Bartov et al. (2000) find that auditor opinions are associated with discretionary accruals. In particular, they find that qualified auditors' opinions are associated with greater magnitudes of discretionary accruals. Consistent with Bradshaw, Richardson and Sloan (1999), a clean unqualified opinion is assigned a value of 0 for the auditor's opinion variable (AUDOP) and a value of 1 for any other types of opinion, such as qualified, adverse or unqualified opinion with explanatory language.

Extreme earnings performance has been found to affect discretionary accruals and failure to control for this variable may lead to erroneous inferences (Dechow et al., 1995). EXPERF takes a value of 1 if a firm's return on assets (item 237/item 6) lies

within the top decile and 0 otherwise.<sup>87</sup> Furthermore, a measure of cash flows from operations, CFO, is introduced to control for its effects on discretionary accruals. Extant literature indicates that cash flow from operations and accruals are negatively correlated (e.g., Dechow, 1994; Dechow et al., 1995; Sloan, 1996). CFO is measured as cash flows from operations (item 308) divided by sales (item 12). Finally, a series of dummy variables for fiscal years (YEAR) is used to control for potential year specific events that impact on discretionary accruals.

Table 5.3 provides the definitions of the dependent variables, and control variables used in this thesis together with the sign of their predicted association with discretionary accruals where appropriate.<sup>88</sup>

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<sup>87</sup> Only positive extreme earnings performance is controlled for as the sample consists of only firms with positive reported earnings (see sample selection section (Section 5.2) above for further details).

<sup>88</sup> Institutional ownership variable definitions can be found in Table 4.4.

**Table 5.3: Variable Definitions\***

Variable	Definition	Expected Sign
Discretionary accruals (DACC)	TACC – NDACC	Dependent Variable
Income increasing discretionary accruals (DACC <sup>+</sup> )	DACC > 0	Dependent Variable
Income decreasing discretionary accruals (DACC <sup>-</sup> )	DACC < 0	Dependent Variable
Size (SIZE)	Natural logarithm of market value of equity (#25 * #199)	No prediction
Leverage (LEV)	Total debt (#9 + #34) to total assets (#6)	+
Equity issues (EQISS)	Amount of new equity issued (#108) divided by market value of equity (#25 * #199)	+
Market-to-book ratio (MKTBV)	Market value of equity (#25 * #199) divided by book value (#216)	+/-**
Auditor (AUD)	1 if audited by Big-6 auditor; 0 otherwise	-
Auditor's opinion (AUDOP)	0 if a firm received a clean unqualified opinion; 1 otherwise	+
Extreme earnings performance (EXPERF)	1 if a firm's ROA (#237/#6) is within the top decile; 0 otherwise	+
Cash flows from operations (CFO)	Cash flows from operations (#308) divided by sales (#12)	-
Year in which the firm-year observation is drawn from (YEAR <sub>k</sub> )	A series of dummy variables where 1 if the firm is drawn from year k; 0 otherwise	No prediction

TACC<sub>i,t</sub> = Total accruals calculated as: [(Income before extraordinary items (#123) – cash flows from operations (#308))/ A<sub>i,t-1</sub>]

NDACC<sub>i,t</sub> = Non-discretionary accruals calculated as:  $\hat{\alpha}_1(1/A_{i,t-1}) + \hat{\alpha}_2(\{\Delta REV_{i,t} - \Delta REC_{i,t}\}/A_{i,t-1}) + \hat{\alpha}_3(PPE_{i,t}/A_{i,t-1})$

A<sub>i,t-1</sub> = Total assets for firm *i* in year t-1 (#6)

ΔREV<sub>i,t</sub> = Change in operating revenue of firm *i* between years t and t-1 (#12)

ΔREC<sub>i,t</sub> = Change in net receivables of firm *i* between years t and t-1 (#151)

PPE<sub>i,t</sub> = Gross property, plant and equipment of firm *i* in year t (#7)

\*Institutional ownership variable definitions are presented on Table 4.4.

\*\*A negative sign is expected only when the dependent variable is income decreasing discretionary accruals (DACC<sup>-</sup>).



### 5.5 Model specifications for hypothesis testing

The statistical significance of the association between discretionary accruals and different types of institutional ownership is assessed *via* pooled cross-sectional Ordinary Least Squares (OLS) regressions. Model specifications for various hypothesis tests are detailed below.<sup>89</sup>

Hypotheses 1 and 2 investigate the relation between income increasing discretionary accruals and different types of institutional ownership (*viz.*, transient *versus* long-term oriented). The models used to test these two hypotheses are as follows, where model 4 is used to test the effects of the two types of institutional ownership on income increasing discretionary accruals and model 5 tests the effects of *relative* institutional ownership on income increasing discretionary accruals:

$$DACC^+ = \beta_0 + \beta_2 TRA + \beta_3 LTPISH + \beta_5 SIZE + \beta_6 LEV + \beta_7 EQISS + \beta_8 MKTBV + \beta_9 AUD + \beta_{10} AUDOP + \beta_{11} EXPERF + \beta_{12} CFO + \beta_k \sum_{k=1996}^{1998} YEAR_k + \varepsilon_i \quad (4)$$

$$DACC^+ = \beta_0 + \beta_1 PISH + \beta_4 TRARELPISH + \beta_5 SIZE + \beta_6 LEV + \beta_7 EQISS + \beta_8 MKTBV + \beta_9 AUD + \beta_{10} AUDOP + \beta_{11} EXPERF + \beta_{12} CFO + \beta_k \sum_{k=1996}^{1998} YEAR_k + \varepsilon_i \quad (5)$$

Where:

$DACC^+$  = Income increasing (positive) discretionary accruals

$PISH$  = Total institutional ownership as a percentage of total shares outstanding

$TRA$  = Transient institutional ownership as a percentage of total shares outstanding

$LTPISH$  = Long-term oriented institutional ownership as a percentage of total shares outstanding

$TRARELPISH$  = Transient institutional ownership relative to total institutional ownership, measured as  $TRA/PISH$

<sup>89</sup> Firm subscripts for all variables are omitted for ease of presentation.

SIZE	= Natural logarithm of market value of equity (#25 * #199)
LEV	= Ratio of total debt (#9 + #34) to total assets (#6)
EQISS	= Amount of new equity issue (#108) divided by market value of equity (#25 * #199)
MKTBV	= Market-to-book ratio (#25 * #199)/(#216)
AUD	= Auditor dummy variable (1 if audited by Big-6 auditors, 0 otherwise)
AUDOP	= Auditor's opinion (0 if a firm received a clean unqualified report, 1 otherwise)
EXPERF	= Extreme earnings performance (1 if a firm's ROA is within the top decile, 0 otherwise)
CFO	= Cash flows from operations (#308) divided by sales (#12)
YEAR <sub>k</sub>	= Dummy variables for years 1996-1998

Coefficients  $\beta_1$ ,  $\beta_2$ , and  $\beta_3$  measure the incremental effects of various institutional ownership types on portfolio firms' discretionary accruals, over and above the effects of non-institutional ownership. Hypothesis 1 predicts positive estimated coefficients for  $\beta_2$  and  $\beta_4$ . Hypothesis 2 predicts a negative estimated coefficient for  $\beta_3$ .

For hypotheses 1a and 2a, the following models test the association between different types of institutional ownership and income decreasing discretionary accruals:<sup>90</sup>

$$DACC = \beta_0 + \beta_2 TRA + \beta_3 LTPISH + \beta_5 SIZE + \beta_6 LEV + \beta_7 EQISS + \beta_8 MKTBV + \beta_9 AUD + \beta_{10} AUDOP + \beta_{11} EXPERF + \beta_{12} CFO + \beta_k \sum_{k=1996}^{1998} YEAR_k + \varepsilon_i \quad (6)$$

$$DACC = \beta_0 + \beta_1 PISH + \beta_4 TRARELPISH + \beta_5 SIZE + \beta_6 LEV + \beta_7 EQISS + \beta_8 MKTBV + \beta_9 AUD + \beta_{10} AUDOP + \beta_{11} EXPERF + \beta_{12} CFO + \beta_k \sum_{k=1996}^{1998} YEAR_k + \varepsilon_i \quad (7)$$

<sup>90</sup> The only difference between models 6 and 7 *versus* models 4 and 5 is the dependent variable.

Where:

DACC = Income decreasing (negative) discretionary accruals

Negative estimated coefficients for  $\beta_2$  and  $\beta_4$  support hypothesis 1a and a positive estimated coefficient for  $\beta_3$  is consistent with hypothesis 2a.

For hypotheses 3 to 8, which test the association between discretionary accruals and types of institutional ownership conditional upon portfolio firms' earnings targets, the following two models are used. In particular, hypotheses 3 and 4 are tested within the "reversible decline" firms using models 8 and 9. Hypotheses 5 and 6 (7 and 8) are tested within the "irreversible decline" ("increased") firms using models 8 and 9.

$$\text{DACC} = \beta_0 + \beta_2\text{TRA} + \beta_3\text{LTPISH} + \beta_5\text{SIZE} + \beta_6\text{LEV} + \beta_7\text{EQISS} + \beta_8\text{MKTBV} + \beta_9\text{AUD} + \beta_{10}\text{AUDOP} + \beta_{11}\text{EXPERF} + \beta_{12}\text{CFO} + \beta_k \sum_{k=1996}^{1998} \text{YEAR}_k + \varepsilon_i \quad (8)$$

$$\text{DACC} = \beta_0 + \beta_1\text{PISH} + \beta_4\text{TRARELPISH} + \beta_5\text{SIZE} + \beta_6\text{LEV} + \beta_7\text{EQISS} + \beta_8\text{MKTBV} + \beta_9\text{AUD} + \beta_{10}\text{AUDOP} + \beta_{11}\text{EXPERF} + \beta_{12}\text{CFO} + \beta_k \sum_{k=1996}^{1998} \text{YEAR}_k + \varepsilon_i \quad (9)$$

Where:

DACC = Discretionary accruals

Table 5.4 summarises the predictions for all the hypotheses developed in Chapters 2 and 3.

**Table 5.4: Summary Predictions of Hypotheses**

Hypothesis	Sample	Relevant Coefficient	Predicted Sign	Comments
1	Income increasing DACC	$\beta_2$ and $\beta_4$	Positive	Models (4) and (5); <i>transient</i> institutional ownership; income <i>increasing</i> discretionary accruals
2	Income increasing DACC	$\beta_3$	Negative	Models (4) and (5); <i>long-term oriented</i> institutional ownership; income <i>increasing</i> discretionary accruals
1a	Income decreasing DACC	$\beta_2$ and $\beta_4$	Negative	Models (6) and (7); <i>transient</i> institutional ownership; income <i>decreasing</i> discretionary accruals
2a	Income decreasing DACC	$\beta_3$	Positive	Models (6) and (7); <i>long-term oriented</i> institutional ownership; income <i>decreasing</i> discretionary accruals
3	RD	$\beta_2$ and $\beta_4$	Positive	Models (8) and (9); <i>transient</i> institutional ownership; level of discretionary accruals
4	RD	$\beta_3$	Negative	Models (8) and (9); <i>long-term oriented</i> institutional ownership; level of discretionary accruals
5	ID	$\beta_2$ and $\beta_4$	Negative	Models (8) and (9); <i>transient</i> institutional ownership; level of discretionary accruals; “ <i>big bath</i> ”
6	ID	$\beta_3$	Negative	Models (8) and (9); <i>long-term oriented</i> institutional ownership; level of discretionary accruals; “ <i>reverse</i> ” <i>myopia</i>
7	IN	$\beta_2$ and $\beta_4$	Negative	Models (8) and (9); <i>transient</i> institutional ownership; level of discretionary accruals; <i>income smoothing</i>
8	IN	$\beta_3$	Negative	Models (8) and (9); <i>long-term oriented</i> institutional ownership; level of discretionary accruals; <i>income smoothing</i>

RD – “Reversible Decline” firms. These are firms with current year non-discretionary earnings *less* than earnings targets but which *meet* their earnings targets via positive discretionary accruals.

ID – “Irreversible Decline” firms. These are firms with current year non-discretionary earnings *less* than earnings targets but *fail* to meet earnings targets after exercising their accrual discretion.

IN – “Increased” firms. These are firms with current year non-discretionary earnings *greater* than earnings targets.

**Table 5.4 (cont'd): Summary Predictions of Hypotheses**

Models:

$$DACC^+ = \beta_0 + \beta_2 TRA + \beta_3 LTPISH + \beta_5 SIZE + \beta_6 LEV + \beta_7 EQISS + \beta_8 MKTBV + \beta_9 AUD + \beta_{10} AUDOP + \beta_{11} EXPERF + \beta_{12} CFO + \beta_k \sum_{k=1996}^{1998} YEAR_k + \varepsilon_i \quad (4)$$

$$DACC^+ = \beta_0 + \beta_1 PISH + \beta_4 TRARELPISH + \beta_5 SIZE + \beta_6 LEV + \beta_7 EQISS + \beta_8 MKTBV + \beta_9 AUD + \beta_{10} AUDOP + \beta_{11} EXPERF + \beta_{12} CFO + \beta_k \sum_{k=1996}^{1998} YEAR_k + \varepsilon_i \quad (5)$$

$$DACC^- = \beta_0 + \beta_2 TRA + \beta_3 LTPISH + \beta_5 SIZE + \beta_6 LEV + \beta_7 EQISS + \beta_8 MKTBV + \beta_9 AUD + \beta_{10} AUDOP + \beta_{11} EXPERF + \beta_{12} CFO + \beta_k \sum_{k=1996}^{1998} YEAR_k + \varepsilon_i \quad (6)$$

$$DACC^- = \beta_0 + \beta_1 PISH + \beta_4 TRARELPISH + \beta_5 SIZE + \beta_6 LEV + \beta_7 EQISS + \beta_8 MKTBV + \beta_9 AUD + \beta_{10} AUDOP + \beta_{11} EXPERF + \beta_{12} CFO + \beta_k \sum_{k=1996}^{1998} YEAR_k + \varepsilon_i \quad (7)$$

$$DACC = \beta_0 + \beta_2 TRA + \beta_3 LTPISH + \beta_5 SIZE + \beta_6 LEV + \beta_7 EQISS + \beta_8 MKTBV + \beta_9 AUD + \beta_{10} AUDOP + \beta_{11} EXPERF + \beta_{12} CFO + \beta_k \sum_{k=1996}^{1998} YEAR_k + \varepsilon_i \quad (8)$$

$$DACC = \beta_0 + \beta_1 PISH + \beta_4 TRARELPISH + \beta_5 SIZE + \beta_6 LEV + \beta_7 EQISS + \beta_8 MKTBV + \beta_9 AUD + \beta_{10} AUDOP + \beta_{11} EXPERF + \beta_{12} CFO + \beta_k \sum_{k=1996}^{1998} YEAR_k + \varepsilon_i \quad (9)$$

Where,

$DACC^+$  = Income increasing discretionary accruals;  $DACC^-$  = Income decreasing discretionary accruals;  $DACC$  = Discretionary accruals;  $PISH$  = Total institutional ownership as a percentage of total shares outstanding;  $TRA$  = Transient institutional ownership as a percentage of total shares outstanding;  $LTPISH$  = Long-term oriented institutional ownership as a percentage of total shares outstanding;  $TRARELPISH$  = Transient institutional ownership relative to total institutional ownership, measured as  $TRA/PISH$ ;  $SIZE$  = Natural logarithm of market value of equity (#25 \* #199);  $LEV$  = Ratio of total debt (#9 + #34) to total assets (#6);  $EQISS$  = Amount of new equity issue (#108) divided by market value of equity (#25 \* #199);  $MKTBV$  = Market-to-book ratio (#25 \* #199)/(#216);  $AUD$  = Auditor dummy variable (1 if audited by Big-6 auditors, 0 otherwise);  $AUDOP$  = Auditor's opinion (0 if a firm received a clean unqualified report, 1 otherwise);  $EXPERF$  = Extreme earnings performance (1 if firm's ROA (#237/#6) is within the top decile, 0 otherwise);  $CFO$  = Cash flows from operations (#308) divided by sales (#12);  $YEAR$  = dummy variables for years 1996-1998.

## **5.6 *Summary and conclusion***

This chapter describes the research design for testing the hypotheses developed in Chapters 2 and 3. It begins by discussing the sample selection process. Section 5.3 then discusses the model and process of estimating discretionary accruals. This is followed by a discussion of factors other than institutional ownership that affect discretionary accruals. General models used to test the hypotheses are then specified in Section 5.5. The next chapter analyses results derived from the hypothesis testing models described in this chapter.

## 6 Analysis of Results

### 6.1 Introduction

This chapter analyses the results derived from testing the hypothesised relations between institutional ownership of portfolio firms and those firms' discretionary accruals. Section 6.2 reports the descriptive statistics while regression analyses of the associations between institutional ownership types and income increasing and income decreasing discretionary accruals are discussed in Section 6.3.<sup>91</sup> Analysis of the associations between institutional ownership types and discretionary accruals among "reversible decline", "irreversible decline" and "increased" firms is reported in Section 6.4. In addition to fitting the regression models 4 to 9 described in the preceding chapter, discretionary accruals are regressed on total institutional ownership (PISH) to provide descriptive comparisons examining the effects of not identifying the types of institutional ownership on discretionary accruals. Section 6.5 discusses the various robustness tests performed on the findings of Sections 6.3 and 6.4. This is followed by a summary and conclusion in Section 6.6.

Overall, the results support most of the hypothesised relations between long-term oriented institutional ownership and portfolio firms' discretionary accruals (H2, H2a, H4 and H6). However, there is no evidence suggesting that long-term oriented institutional ownership encourages income smoothing behaviour (H8). More specifically, the results show that long-term oriented institutional ownership is negatively (positively) associated with income increasing (decreasing) discretionary

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<sup>91</sup> All t-statistics from the regression analysis are corrected for heteroscedasticity using White's (1980) heteroscedasticity-consistent covariance matrix.

accruals, consistent with the contention that long-term oriented institutional investors actively involve in monitoring their portfolio firms, thus constraining portfolio firm managers' accruals discretion. This constraining effect is also evident among portfolio firms that have greatest incentives to manage their earnings aggressively (*viz.*, "reversible decline" firms). In addition to the constraining effect long-term oriented institutional investors have on their portfolio firm managers, long-term oriented institutional ownership is associated with "reverse" myopic behaviour among portfolio firms that face an inevitable failure to meet their earnings targets (*viz.*, "irreversible decline" firms). This suggests a potential conservative bias in long-term oriented institutional investors' constraints on portfolio firm managers' accruals discretion. The above findings are unlikely to be attributable to measurement error in discretionary accruals, and are robust to different measures of institutional ownership, different specifications of the relation between discretionary accruals and firm size, and the effects of accounting flexibility available to portfolio firm managers.

The results concerning the relations between transient institutional ownership and portfolio firms' discretionary accruals are less conclusive. The predicted negative relation between transient institutional ownership and income decreasing discretionary accruals is robust and consistent with transitory institutional investment creating incentives for portfolio firm managers to engage in myopic accruals management to create accounting slack for future periods. However, the predicted positive relation between transient institutional ownership and income increasing discretionary accruals is not found in the main test. Additional tests reveal that portfolio firms with predominantly transient institutional ownership are positively associated with income increasing discretionary accruals.



When tested in an environment where myopic earnings management should be most pronounced (among “reversible decline” firms), the results supporting the transient investor hypothesis are not as robust. While the predicted relation is only significant at the 10% level in the main test, for “reversible decline” firms with a high proportion of ownership by transient institutions, the transient investor hypothesis is supported at the 5% level. When constraints on the accounting flexibility available to portfolio firm managers are considered, no support is found for the transient investor hypothesis. Similar to Bushee (1998), overall evidence of the short-term effects of transient institutional investment is more consistent and robust when total institutional ownership is predominantly made up of transient institutional ownership. Therefore, the impact of transient institutional ownership on earnings management, in general, may not be as severe as has been criticised (e.g., Black 1998, Black and Coffee, 1994; Coffee, 1991; Levitt, 1998).

There is only limited evidence suggesting transient institutional investors encourage income smoothing behaviour among portfolio firms. Finally, there is insufficient evidence to conclude that transient institutional ownership is associated with “big bath” behaviour. However, this lack of evidence might be explained by the inherent characteristics of the sample firms.

## 6.2 *Descriptive statistics*

Tables 6.1 and 6.2 tabulate the means and standard deviations for the variables used in this study.<sup>92</sup> In particular, Table 6.1 reports the descriptive statistics for the complete sample as well as two sub-samples partitioned according to whether firms have income increasing (positive) or income decreasing (negative) discretionary accruals. Descriptive statistics for “reversible decline” (RD), “irreversible decline” (ID) and “increased” (IN) firms appear in Table 6.2.

As shown in the first column of Table 6.1, the average discretionary accruals of the overall sample of firms are 3.26% of prior year total assets. Institutional investors own about 36% of portfolio firms’ equity, with transient institutions and long-term oriented institutions owning around 10% and 26% of equity respectively. The average market capitalisation (MVE) of the sample firms is \$2,375 million and there is an average market-to-book ratio (MKTBV) of 3.15. The average leverage ratio (LEV) is 0.22 and sample firms have an average return on assets (ROA) of 7.2%. The average of cash flows from operation to sales (CFO) is 11.7% and sample firms raised, on average, 3.9% of their market value as new equity (EQISS) during the test period.

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<sup>92</sup> Market value of equity (MVE) instead of natural logarithm of MVE (proxy for SIZE) is reported in Tables 6.1 and 6.2 as MVE is more descriptive for the purpose of descriptive analyses as compared to its logarithm transformation variable. The same applies to return on assets (ROA), where it is used to obtain the extreme earnings performance variable (EXPERF).

**Table 6.1: Descriptive Statistics for Complete (All), Income Increasing Discretionary Accruals (DACC<sup>+</sup>) and Income Decreasing Discretionary Accruals (DACC<sup>-</sup>) Samples**

Variable*		Sample**			Differences in Means (2-tail p-value) <sup>†</sup> DACC <sup>+</sup> - DACC <sup>-</sup>
		All	DACC <sup>+</sup>	DACC <sup>-</sup>	
		(1)	(2)	(3)	(4)
DACC	Mean	0.0326	0.1001	-0.0692	0.1693
	Std. Dev.	0.1349	0.1190	0.0840	0.0000
PISH	Mean	0.3576	0.3402	0.3838	-0.0435
	Std. Dev.	0.2587	0.2574	0.2585	0.0000
TRA	Mean	0.0989	0.0949	0.1051	-0.0102
	Std. Dev.	0.0899	0.0888	0.0912	0.0000
TRARELPISH	Mean	0.2962	0.3009	0.2891	0.0118
	Std. Dev.	0.2162	0.2222	0.2068	0.0493
LTPISH	Mean	0.2584	0.2452	0.2784	-0.0332
	Std. Dev.	0.2010	0.2002	0.2006	0.0000
MVE	Mean	2375.46	2282.07	2516.20	-234.13
	Std. Dev.	6359.60	6268.01	6494.15	0.1942
LEV	Mean	0.2219	0.2221	0.2215	0.0006
	Std. Dev.	0.1896	0.1870	0.1936	0.9132
MKTBV	Mean	3.1525	2.9790	3.4140	-0.4350
	Std. Dev.	4.6646	4.2097	5.2667	0.0015
ROA	Mean	0.0718	0.0746	0.0675	0.0071
	Std. Dev.	0.0622	0.0676	0.0528	0.0000
CFO	Mean	0.1171	0.0875	0.1617	-0.0742
	Std. Dev.	0.1501	0.1495	0.1397	0.0000
EQISS	Mean	0.0390	0.0408	0.0362	0.0046
	Std. Dev.	0.0937	0.0962	0.0896	0.0752
Dichotomous Variables:					
AUD	Mean	0.9061	0.8846	0.9385	-0.0539
	Std. Dev.	0.2917	0.3196	0.2402	0.0000
AUDOP	Mean	0.1334	0.1420	0.1205	0.0215
	Std. Dev.	0.3400	0.3491	0.3257	0.0233
N		5262	3163	2099	

\*t-tests.

\*DACC = Discretionary accruals; PISH = Percentage of institutional ownership as a whole; TRA = Percentage of transient institutional ownership; LTPISH = Percentage of long-term oriented institutional ownership; TRARELPISH = Relative institutional ownership measured as TRA/PISH; MVE = Market value of equity (#25 \* #199); LEV = Ratio of total debt (#9 + #34) to total assets (#6); MKTBV = Market-to-book ratio (#25 \* #199)/(#216); ROA = Return on assets (#237/#6); CFO = Cash flows from operations (#308) divided by sales (#12); EQISS = Amount of new equity issue (#108) divided by market value of equity (#25 \* #199); AUD = Auditor dummy variable (1 if audited by Big-6 auditors, 0 otherwise); AUDOP = Auditor's opinion (0 if a firm received a clean unqualified report, 1 otherwise)

\*\*Sample under the headings "All" is the complete sample, "DACC<sup>+</sup>" is firms with positive discretionary accruals, "DACC<sup>-</sup>" is firms with negative discretionary accruals.

As compared to a larger sample including firms reporting losses (not tabulated), it is not surprising that the sample firms selected for hypothesis testing on average have greater market capitalisation (MVE of \$2,375m vs. \$1,624m) and have better performance in terms of (a) their return on assets ratio (ROA of 7.2% vs. -9.1%) and (b) their cash flows from operation to sales ratio (CFO of 11.7% vs. -141.5%). Furthermore, the average discretionary accruals for the larger sample including loss-making firms is 0.07% of prior year total assets (compared to hypothesis testing firms' average of 3.26%). The sample including firms reporting losses raise, on average, 7.7% of new equity which is greater than the hypothesis testing firms (3.9%). The leverage ratio (LEV) and market-to-book ratio (MKTBV) as well as institutional ownership levels (PISH, TRA, LTPISH) are comparable between the hypothesis testing sample firms and the sample including loss-making firms.<sup>93</sup>

Columns 2 and 3 of Table 6.1 report the means and standard deviations of the variables for sub-sample firms that engaged in income increasing (positive) and income decreasing (negative) discretionary accruals respectively. Sample firms that engaged in income increasing discretionary accruals have significantly less institutional ownership (PISH), as well as significantly less transient (TRA) and long-term oriented (LTPISH) institutional ownership, than firms that engaged in income decreasing discretionary accruals (column 4). However, firms engaged in positive discretionary accruals have significantly more transient institutional ownership *relative to* long-term oriented institutional ownership (TRARELPISH) than firms with negative discretionary accruals (30.1% *versus* 28.9%;  $p=0.0493$ ).

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<sup>93</sup> The average leverage ratio, market-to-book ratio, total, transient, and long-term oriented institutional ownership for the sample including firms reporting losses are, respectively 0.25, 3.54, 31%, 9% and 22%.

Firms with income increasing discretionary accruals also have a lower market-to-book ratio (MKTBV,  $p=0.0015$ ) and generate less cash flows from operations per every dollar of sales (CFO,  $p=0.0000$ ) than firms with income decreasing discretionary accruals. Nonetheless, portfolio firms with income increasing discretionary accruals are able to generate higher returns on assets (ROA) than portfolio firms with income decreasing discretionary accruals (7.46% *versus* 6.75%;  $p=0.0000$ ). The better returns on assets achieved by firms with positive discretionary accruals (relative to firms with negative decreasing discretionary accruals) may be the result of firms' accruals management. This is consistent with the observation that the difference in the average discretionary accruals levels between firms with positive discretionary accruals and negative discretionary accruals is about 17% of prior year total assets (see Table 6.1, column 4). Although not directly comparable, the difference in the level of discretionary accruals between the two types of firms is likely to be more than enough to explain the difference in an accounting measure of return on assets of 0.71%.<sup>94</sup>

Firms reporting income increasing discretionary accruals are less likely to be audited by Big-6 auditors and are more likely to received qualified audit opinions than firms with income decreasing discretionary accruals ( $p=0.0000$  and  $p=0.0233$  respectively). These results are consistent with empirical findings that firms with Big-6 auditors report less income increasing discretionary accruals (Becker et al., 1998), and auditors are more likely to focus on earnings overstatement (DeFond and Jiambalvo, 1991, 1993; Hirst, 1994, St. Pierre and Anderson, 1984).

<sup>94</sup> The differences in discretionary accruals levels and return on assets are not directly comparable because discretionary accruals are expressed as a percentage of prior year total assets whilst return on assets is expressed as a percentage of current year total assets.

Table 6.2 reports the descriptive statistics for “reversible decline” (RD), “irreversible decline” (ID) and “increased” (IN) samples. “Reversible decline” (RD) firms on average have the most positive discretionary accruals, followed by “irreversible decline” (ID) firms and “increased” (IN) respectively. “Increased” (IN) firms have average negative discretionary accruals, suggesting that these firms might be smoothing their reported earnings. Among the three types of firms, “irreversible decline” (ID) firms have the least institutional ownership in terms of total, transient and long-term oriented institutional ownership (PISH, TRA and LTPISH respectively). However, the relative proportion of transient and long-term oriented institutional ownership (TRARELPISH) is comparable across the three types of firms. The market values of equity for all three types of firms are comparable, reducing the likelihood of size effects for later analyses.

As compared to “irreversible decline” (ID) firms, “reversible decline” (RD) firms (Table 6.2 column 4) have significantly more positive discretionary accruals (DACC;  $p=0.0000$ ), greater total institutional ownership (PISH;  $p=0.0085$ ), and transient institutional ownership (TRA;  $p=0.0002$ ). “Reversible decline” (RD) firms have lower leverage ratios (LEV;  $p=0.0420$ ), higher market-to-book ratios (MKTBV;  $p=0.0000$ ), and raise more new equity (EQISS;  $p=0.0000$ ) than “irreversible decline” (ID) firms. Although “reversible decline” (RD) firms achieve higher returns on assets (ROA;  $p=0.0000$ ) than “irreversible decline” (ID) firms, they generate lower cash flows from operations (CFO;  $p=0.0000$ ) than “irreversible decline” (ID) firms.

**Table 6.2: Descriptive Statistics for Reversible Decline (RD), Irreversible Decline (ID) and Increased (IN) Samples**

Variable*		Sample**			Differences in Means (2-tail p-value) <sup>^</sup>		
		RD	ID	IN	RD - ID	RD - IN	ID - IN
		(1)	(2)	(3)	(4)	(5)	(6)
DACC	Mean	0.1256	0.0640	-0.0308	0.0616	0.1563	0.0948
	Std. Dev.	0.1237	0.1044	0.1159	0.0000	0.0000	0.0000
PISH	Mean	0.3442	0.3175	0.3803	0.0267	-0.0361	-0.0628
	Std. Dev.	0.2609	0.2438	0.2607	0.0085	0.0000	0.0000
TRA	Mean	0.0950	0.0827	0.1073	0.0123	-0.0123	-0.0246
	Std. Dev.	0.0878	0.0746	0.0953	0.0002	0.0000	0.0000
TRARELPISH	Mean	0.3021	0.2879	0.2962	0.0143	0.0059	-0.0083
	Std. Dev.	0.2235	0.2162	0.2121	0.1087	0.3972	0.2859
LTPISH	Mean	0.2490	0.2347	0.2727	0.0144	-0.0237	-0.0380
	Std. Dev.	0.2039	0.1951	0.2005	0.0754	0.0003	0.0000
MVE	Mean	2439.56	2524.08	2283.21	-84.52	156.35	240.87
	Std. Dev.	6596.73	6645.07	6110.51	0.7515	0.4492	0.3099
LEV	Mean	0.2224	0.2374	0.2156	-0.0150	0.0068	0.0218
	Std. Dev.	0.1844	0.1822	0.1949	0.0420	0.2636	0.0013
MKTBV	Mean	3.1103	2.3806	3.4707	0.7297	-0.3604	-1.0901
	Std. Dev.	3.8186	3.6613	5.3481	0.0000	0.0113	0.0000
ROA	Mean	0.0759	0.0510	0.0775	0.0249	-0.0016	-0.0265
	Std. Dev.	0.0538	0.0516	0.0683	0.0000	0.4139	0.0000
CFO	Mean	0.0759	0.1003	0.1464	-0.0244	-0.0705	-0.0461
	Std. Dev.	0.1501	0.1482	0.1445	0.0000	0.0000	0.0000
EQISS	Mean	0.0440	0.0278	0.0405	0.0162	0.0035	-0.0127
	Std. Dev.	0.0979	0.0894	0.0925	0.0000	0.2621	0.0001
Dichotomous Variables:							
AUD	Mean	0.8830	0.8816	0.9283	0.0014	-0.0453	-0.0467
	Std. Dev.	0.3216	0.3232	0.2581	0.9166	0.0000	0.0000
AUDOP	Mean	0.1250	0.1492	0.1320	-0.0242	-0.0070	0.0171
	Std. Dev.	0.3308	0.3564	0.3386	0.0835	0.5146	0.1813
N		1504	1039	2719			

<sup>^</sup> t-tests.

\*DACC = Discretionary accruals; PISH = Percentage of institutional ownership as a whole; TRA = Percentage of transient institutional ownership; LTPISH = Percentage of long-term oriented institutional ownership; TRARELPISH = Relative institutional ownership measured as TRA/PISH; MVE = Market value of equity (#25 \* #199); LEV = Ratio of total debt (#9 + #34) to total assets (#6); MKTBV = Market-to-book ratio (#25 \* #199)/(#216); ROA = Return on assets (#237/#6); CFO = Cash flows from operations (#308) divided by sales (#12); EQISS = Amount of new equity issue (#108) divided by market value of equity (#25 \* #199); AUD = Auditor dummy variable (1 if audited by Big-6 auditors, 0 otherwise); AUDOP = Auditor's opinion (0 if a firm received a clean unqualified report, 1 otherwise)

\*\*Sample under the headings:

RD – “Reversible Decline” firms. These are firms with current year non-discretionary earnings *less* than earnings targets but which *meet* their earnings targets via positive discretionary accruals.

ID – “Irreversible Decline” firms. These are firms with current year non-discretionary earnings *less* than earnings targets but *fail* to meet earnings targets after exercising their accrual discretion.

IN – “Increased” firms. These are firms with current year non-discretionary earnings *greater* than earnings targets.

Relative to “increased” (IN) firms, “reversible decline” (RD) firms (Table 6.2 column 5) again have significantly more positive discretionary accruals (DACC;  $p=0.0000$ ) but have less institutional ownership in general (PISH;  $p=0.0000$ ), and less of both transient (TRA;  $p=0.0000$ ) and long-term oriented (LTPISH;  $p=0.0003$ ) institutional ownership. “Reversible decline” (RD) firms also have lower market-to-book ratios (MKTBV;  $p=0.0113$ ) and generate less cash flows from operations (CFO;  $p=0.0000$ ) than “increased” (IN) firms. There are less “reversible decline” (RD) firms audited by Big-6 auditors (AUD;  $p=0.0000$ ) than “increased” (IN) firms.

Finally, “irreversible decline” (ID) firms have significantly more positive discretionary accruals (DACC;  $p=0.0000$ ) than “increased” (IN) firms (Table 6.2 column 6). “Irreversible decline” (ID) firms have lower institutional ownerships (total, transient and long-term oriented) than “increased” (IN) firms ( $p=0.0000$  for all). “Irreversible decline” (ID) firms on average have higher leverage ratios (LEV;  $p=0.0013$ ), lower market-to-book ratios (MKTBV;  $p=0.0000$ ), and returns on assets (ROA;  $p=0.0000$ ). They generate less cash flows from operations (CFO;  $p=0.0000$ ) and raise less new equity (EQISS;  $p=0.0001$ ) than “increased” (IN) firms.

The above descriptive comparisons among “reversible decline” (RD), “irreversible decline” (ID) and “increased” (IN) firms lead to the following inferences. First, the average discretionary accruals of “reversible decline” (RD) firms are the most income increasing, consistent with the manner in which they are classified. That is, “reversible decline” firms are firms that meet their earnings targets *via* positive discretionary accruals. The positive (negative) average discretionary accruals of “irreversible decline” (“increased”) firms may indicate that these firms engaged in income smoothing strategies to move their reported earnings closer to their earnings



targets. Total, transient and long-term oriented institutional ownerships are lower among firms that failed to meet their earnings targets (i.e., “irreversible decline” (ID) firms).<sup>95</sup> This suggests that institutional investors, regardless of their investment strategies, are less interested in firms that do not meet earnings targets than in other firms.

The other main characteristics distinguishing firms that fail to meet their earnings targets (“irreversible decline”) and other firms (“reversible decline” and “increased”) are leverage ratios (LEV), market-to-book ratios (MKTBV), return on assets (ROA), and new equity issues (EQISS). In particular, “irreversible decline” firms, on average, have higher leverage ratios (LEV), lower market-to-book ratios (MKTBV), lower returns on assets (ROA) and raise less new equity (EQISS) than “reversible decline” and “increased” firms. These differences suggest that, in general, firms that fail to meet their earnings targets (“irreversible decline” firms) are not performing as well as firms that meet their earnings targets (“reversible decline” and “increased”). This may in turn explain the lower institutional ownership among “irreversible decline” firms.

The correlation matrix for independent variables is reported in Table 6.3. Pearson (Spearman) correlation coefficients are below (above) the diagonal. For the purpose of this discussion, Spearman correlation coefficients are used since they do not require the variables to be normally distributed. Institutional ownership (PISH) appears to be positively correlated with firm size (SIZE), market-to-book ratios (MKTBV), cash flows from operations (CFO), new equity issues (EQISS) and Big-6

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<sup>95</sup> One exception is that the average long-term oriented institutional ownership among “irreversible decline” (ID) firms is only marginally lower than “reversible decline” (RD) firms ( $p=0.0754$ ).

auditors (AUD). The similarities between transient (TRA) and long-term oriented (LTPISH) institutional ownerships include that both types of institutional ownership are positively correlated with firm size (SIZE), market-to-book ratios (MKTBV), cash flows from operations (CFO), new equity issues (EQISS) and Big-6 auditors (AUD).

However, they diverge in that while transient institutional ownership is *positively* correlated with extreme earnings performance (EXPERF) at the 5% level, long-term oriented institutional ownership is *negatively* correlated with extreme earnings performance at the 10% level. The positive correlation between transient ownership and extreme earnings performance is consistent with the view that transient institutions off-load portfolio firms with below par earnings performance, and invest or retain investment in portfolio firms reporting high earnings performance. Also, transient institutional ownership is negatively correlated with firms' leverage ratios (LEV), and no such correlation is found between long-term oriented institutional ownership and leverage ratios. In summary, earnings performance and leverage ratios are the key portfolio firm characteristics distinguishing between transient and long-term oriented institutional ownership, corroborating the analysis of Table 6.2 above.

**Table 6.3: Correlation Matrix of Independent Variables for Complete Sample - Pearson (Spearman) Correlation Coefficients are below (above) the diagonal**

	PISH	TRA	TRARELPISH	LTPISH	SIZE	LEV	MKTBV	EXPERF	CFO	EQISS	AUD	AUDOP
PISH		0.8064	-0.0071	0.9623	0.4233	-0.0021	0.1824	-0.0083	0.0948	0.1085	0.2309	0.0100
2-tail p-values		<0.0001	0.6061	<0.0001	<0.0001	0.8807	<0.0001	0.5459	<0.0001	<0.0001	<0.0001	0.4667
TRA	0.7427		0.4964	0.6387	0.3118	-0.0539	0.2055	0.0326	0.0477	0.1721	0.1697	-0.0470
2-tail p-values	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0179	0.0005	<0.0001	<0.0001	0.0006
TRARELPISH	-0.1248	0.3333		-0.2212	-0.0390	-0.0652	0.0941	0.0652	-0.0428	0.1311	-0.0249	-0.0728
2-tail p-values	<0.0001	<0.0001		<0.0001	0.0047	<0.0001	<0.0001	<0.0001	0.0019	<0.0001	0.0705	<0.0001
LTPISH	0.9539	0.5085	-0.3093		0.4356	0.0202	0.1519	-0.0261	0.1092	0.0688	0.2402	0.0317
2-tail p-values	<0.0001	<0.0001	<0.0001		<0.0001	0.1435	<0.0001	0.0587	<0.0001	<0.0001	<0.0001	0.0214
SIZE	0.4045	0.2273	-0.1170	0.4169		0.1171	0.4097	0.0085	0.3394	-0.0277	0.2385	0.0990
2-tail p-values	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	0.5398	<0.0001	0.0444	<0.0001	<0.0001
LEV	-0.0009	-0.0604	-0.0406	0.0259	0.0737		-0.2026	-0.2566	0.0375	-0.1713	0.0242	0.1301
2-tail p-values	0.9503	<0.0001	0.0032	0.0608	<0.0001		<0.0001	<0.0001	0.0065	<0.0001	0.0788	<0.0001
MKTBV	0.0634	0.1046	0.0378	0.0331	0.2256	-0.1178		0.2483	0.1153	0.1812	0.0859	-0.0762
2-tail p-values	<0.0001	<0.0001	0.0061	0.0164	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EXPERF	-0.0078	0.0440	0.0537	-0.0307	0.0049	-0.2187	0.1694		0.1078	0.0291	-0.0436	-0.0591
2-tail p-values	0.5715	0.0014	<0.0001	0.0260	0.7252	<0.0001	<0.0001		<0.0001	0.0345	0.0016	<0.0001
CFO	0.0423	0.0149	-0.0430	0.0469	0.2445	0.0684	0.0528	0.0719		-0.0908	0.0865	0.0383
2-tail p-values	0.0021	0.2789	0.0018	0.0007	<0.0001	<0.0001	0.0001	<0.0001		<0.0001	<0.0001	0.0055
EQISS	-0.0557	0.0181	0.0823	-0.0794	-0.1394	-0.0643	-0.0333	-0.0406	-0.0747		0.0580	-0.0688
2-tail p-values	<0.0001	0.1883	<0.0001	<0.0001	<0.0001	<0.0001	0.0158	0.0032	<0.0001		<0.0001	<0.0001
AUD	0.2167	0.1309	-0.0704	0.2201	0.2464	0.0209	0.0393	-0.0436	0.0661	-0.0181		0.0190
2-tail p-values	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.1289	0.0044	0.0016	<0.0001	0.1900		0.1686
AUDOP	0.0150	-0.0505	-0.0569	0.0422	0.0929	0.1226	-0.0633	-0.0591	0.0447	-0.0376	0.0190	
2-tail p-values	0.2757	0.0003	<0.0001	0.0022	<0.0001	<0.0001	<0.0001	<0.0001	0.0012	0.0064	0.1686	

PISH = Total institutional ownership as a percentage of total shares outstanding; TRA = Transient institutional ownership as a percentage of total shares outstanding; LTPISH = Long-term oriented institutional ownership as a percentage of total shares outstanding; TRARELPISH = Transient institutional ownership relative to total institutional ownership, measured as TRA/PISH; SIZE = Natural logarithm of market value of equity (#25 \* #199); LEV = Ratio of total debt (#9 + #34) to total assets (#6); MKTBV = Market-to-book ratio (#25 \* #199)/(#216); EXPERF = Extreme earnings performance (1 if firm's ROA (#237/#6) is within the top decile, 0 otherwise; CFO = Cash flows from operations (#308) divided by sales (#12); EQISS = Amount of new equity issue (#108) divided by market value of equity (#25 \* #199); AUD = Auditor dummy variable (1 if audited by Big-6 auditors, 0 otherwise); AUDOP = Auditor's opinion (0 if a firm received a clean unqualified report, 1 otherwise)

Transient institutional ownership is also *negatively* correlated with qualified audit opinion (AUDOP), contrasting with a *positive* correlation between long-term oriented institutional ownership and qualified audit opinion. The positive correlation between long-term oriented institutional ownership and qualified audit opinion is consistent with the view that long-term oriented institutions stay with their portfolio firms for the long haul where during the period of their ownership, their portfolio firms might receive qualified audit opinions but the effects were not sufficient for them to withdraw their investments from those firms. In contrast, the “prudent man” law might have affected transient institutions to off-load portfolio firms that received a qualified audit opinion, thus leading to the negative correlation between transient ownership and qualified audit opinion.

It is obvious from Table 6.3 that many of the variables are significantly correlated with each other. However, only the variation of institutional ownership measures (specifically, PISH, TRA, and LTPISH) have correlation coefficients greater than 0.5. Furthermore, collinearity diagnostics performed on all sample partitions using the condition index and VIF (variance inflation factors) are all within the conventional acceptable levels of 30 and 10 respectively (Kennedy, 1992). Therefore, multicollinearity should not be an issue for the OLS analyses performed in the later sections.

### **6.3 *Regression results: Associations between institutional ownership type and income increasing (decreasing) discretionary accruals***

The next two subsections (*viz.*, Sections 6.3.1 and 6.3.2) analyse the results from regression models examining the relations between institutional ownership type and income increasing and income decreasing discretionary accruals respectively. They provide empirical evidence to examine the predicted relations as per hypotheses 1, 1a, 2 and 2a.

#### **6.3.1 *Effects of institutional ownership type on income increasing discretionary accruals***

The results for multiple regression analyses of the association between types of institutional ownership and income increasing discretionary accruals appear in Table 6.4. Model 4 examines relations between income increasing discretionary accruals and (a) transient institutional ownership (TRA), and (b) long-term oriented institutional ownership (LTPISH). Model 5 examines the relation between income increasing discretionary accruals and transient institutional ownership *relative* to total institutional ownership (TRARELPISH). Hypothesis 1 predicts that transient institutional ownership is positively associated with income increasing discretionary accruals. This prediction is not supported in model 4 ( $p=0.1881$  for TRA), indicating that transient institutional investors do not affect portfolio firms' income increasing discretionary accruals any differently from non-institutional investors.

**Table 6.4: Regression Analyses for Sample Firms with Income Increasing Discretionary Accruals\* (Dependent Variable: DACC<sup>+</sup>)**

Variable**	Expected Sign	Model 4	Model 5	Comparative
Intercept		0.1413	0.1329	0.1423
<i>p-value</i>		0.0000	0.0000	0.0000
PISH	+/-		-0.0415	-0.0440
<i>p-value</i>			0.0000	0.0000
TRA	+	0.0258		
<i>p-value</i>		0.1881		
LTPISH	-	-0.0699		
<i>p-value</i>		0.0000		
TRARELPISH	+		0.0287	
<i>p-value</i>			0.0035	
SIZE	+/-	-0.0057	-0.0059	-0.0061
<i>p-value</i>		0.0000	0.0000	0.0000
LEV	+	0.0143	0.0131	0.1260
<i>p-value</i>		0.1021	0.1210	0.1324
MKTBV	+	0.0036	0.0036	0.0037
<i>p-value</i>		0.0000	0.0000	0.0000
EXPERF	+	0.0766	0.0764	0.0779
<i>p-value</i>		0.0000	0.0000	0.0000
CFO	-	-0.2339	-0.2322	-0.2351
<i>p-value</i>		0.0000	0.0000	0.0000
EQISS	+	0.2432	0.2422	0.2492
<i>p-value</i>		0.0000	0.0000	0.0000
AUD	-	-0.0203	-0.0201	-0.0207
<i>p-value</i>		0.0017	0.0017	0.0013
AUDOP	+	-0.0013	-0.0016	-0.0018
<i>p-value</i>		0.3936	0.3737	0.3551
Adjusted R <sup>2</sup>		0.2586	0.2590	0.2566
N		3163	3163	3163

\*p-values are derived from White (1980) corrected t-statistics. Reported p-values are one-tail if sign for the estimated coefficients is predicted, otherwise, two-tail p-values are reported.

\*\*DACC<sup>+</sup> = Income increasing discretionary accruals; PISH = Total institutional ownership as a percentage of total shares outstanding; TRA = Transient institutional ownership as a percentage of total shares outstanding; LTPISH = Long-term oriented institutional ownership as a percentage of total shares outstanding; TRARELPISH = Transient institutional ownership relative to total institutional ownership, measured as TRA/PISH; SIZE = Natural logarithm of market value of equity (#25 \* #199); LEV = Ratio of total debt (#9 + #34) to total assets (#6); MKTBV = Market-to-book ratio (#25 \* #199)/(#216); EXPERF = Extreme earnings performance (1 if firm's ROA (#237/#6) is within the top decile, 0 otherwise; CFO = Cash flows from operations (#308) divided by sales (#12); EQISS = Amount of new equity issue (#108) divided by market value of equity (#25 \* #199); AUD = Auditor dummy variable (1 if audited by Big-6 auditors, 0 otherwise); AUDOP = Auditor's opinion (0 if a firm received a clean unqualified report, 1 otherwise)

Bushee (1998) finds that transient institutional ownership is associated with myopic earnings management (through cutting R&D expenditure) by portfolio firms when portfolio firms' institutional ownership is predominately made up of transient institutional ownership. In additional tests, an indicator variable, DQ5(TRA), which takes a value of 1 when TRARELPISH falls within the top quintile and 0 otherwise (Bushee, 1998), is used to replace TRA in the regression analysis. Consistent with Bushee (1998) findings, DQ5(TRA) is positively significant at the 5% level ( $p=0.0237$ ; not tabled). Therefore, the positive association between portfolio firms' income increasing discretionary accruals and transient institutional ownership is stronger when the institutional ownership of portfolio firms is predominantly made up of transient institutional ownership.

The results in model 5 support a positive association between income increasing discretionary accruals and transient institutional ownership *relative* to total institutional ownership ( $p=0.0035$  for TRARELPISH). The difference in results between models 4 and 5 suggests the nature of the positive association between transient institutional ownership *relative* to total institutional ownership and income increasing discretionary accruals is dominated by the significant negative association between long-term oriented institutional ownership and income increasing discretionary accruals ( $p=0.0000$  for LTPISH, discussed below).

Hypothesis 2 predicts that the constraining effects of long-term oriented institutional investors will lead to a negative association between long-term oriented institutional ownership and income increasing discretionary accruals. This prediction is supported ( $p=0.0000$  for LTPISH in model 4), suggesting that as long-term oriented institutional ownership increases in portfolio firms with income increasing

discretionary accruals, the smaller are the portfolio firms' positive discretionary accruals. This also indicates that firms with high levels of long-term oriented institutional ownership have lower income increasing discretionary accruals than firms with high levels of non-institutional ownership.

In addition, institutional ownership in general (PISH) is significantly negatively associated with income increasing discretionary accruals. Given the findings in models 4 and 5, this negative association appears to be driven by long-term oriented institutional ownership. All the above results suggest that failure to consider the types of institutional ownership may lead researchers to prematurely conclude that institutional investors, in general, do not lead to portfolio firm managerial short-termism. Such conclusion would have ignored the evidence that portfolio firms with high proportion of ownership by transient institutions are associated with more income increasing discretionary accruals.

Other findings include that larger firms (SIZE) appear to engage in less income increasing discretionary accruals ( $p=0.0000$ ), consistent with the political cost argument (Watts and Zimmerman, 1978). Furthermore, consistent with the "torpedo effects" suggested by Skinner and Sloan (1999), firms with higher market-to-book ratios (MKTBV) have more income increasing discretionary accruals ( $p=0.0000$ ). The amount of new equity issues (EQISS) is associated with more income increasing discretionary accruals ( $p=0.0000$ ). Also, firms that experienced extreme earnings performance (EXPERF) have more income increasing discretionary accruals ( $p=0.0000$ ). Consistent with the findings in Becker et al. (1998), firms audited by Big-6 auditors (AUD) have less income increasing discretionary accruals. As expected, there is a significant negative association between cash flows from



operations (CFO) and discretionary accruals. The regression models explain around 26% of the variation in discretionary accruals.

### **6.3.2 Effects of institutional ownership type on income decreasing discretionary accruals**

Table 6.5 reports the regression results for the relation between institutional ownership types and income decreasing discretionary accruals. Transient institutional ownership (TRA) is significantly negatively associated with income decreasing discretionary accruals (DACC;  $p=0.0002$ ). This supports hypothesis 1a that as transient institutional ownership increases in firms with income decreasing discretionary accruals, the more negative are the portfolio firms' discretionary accruals. This means that firms with high levels of transient institutional ownership have larger income decreasing discretionary accruals than firms with high levels of non-institutional ownership. The results from regression model 7 further support hypothesis 1a, where a significant negative relation is found between transient ownership relative to total institutional ownership (TRARELPISH) and income decreasing discretionary accruals (DACC;  $p=0.0002$ ). These results are consistent with the big bath hypothesis and short-term incentives being provided by transient institutional investors.

**Table 6.5: Regression Analyses for Sample Firms with Income Decreasing Discretionary Accruals\* (Dependent Variable: DACC)**

Variable**	Expected Sign	Model 6	Model 7	Comparative
Intercept		-0.0791	-0.0684	-0.0809
<i>p-value</i>		0.0000	0.0000	0.0000
PISH	+/-		-0.0035	-0.0008
<i>p-value</i>			0.3016	0.4547
TRA	-	-0.0930		
<i>p-value</i>		0.0002		
LTPISH	+	0.0329		
<i>p-value</i>		0.0005		
TRARELPISH	-		-0.0370	
<i>p-value</i>			0.0002	
SIZE	+/-	0.0073	0.0076	0.0079
<i>p-value</i>		0.0000	0.0000	0.0000
LEV	+	0.0395	0.0407	0.0426
<i>p-value</i>		0.0001	0.0000	0.0000
MKTBV	-	-0.0026	-0.0026	-0.0027
<i>p-value</i>		0.0000	0.0000	0.0000
EXPERF	+	0.0009	0.0001	0.0005
<i>p-value</i>		0.4525	0.4963	0.4757
CFO	-	-0.1330	-0.1330	-0.1271
<i>p-value</i>		0.0000	0.0000	0.0000
EQISS	+	-0.1175	-0.1195	-0.1220
<i>p-value</i>		0.0000	0.0000	0.0000
AUD	-	-0.0094	-0.0096	-0.0090
<i>p-value</i>		0.0787	0.0717	0.0861
AUDOP	+	0.0095	0.0103	0.0104
<i>p-value</i>		0.0189	0.0131	0.0114
Adjusted R <sup>2</sup>		0.1364	0.1362	0.1289
N		2099	2099	2099

\*p-values are derived from White (1980) corrected t-statistics. Reported p-values are one-tail if sign for the estimated coefficients is predicted, otherwise, two-tail p-values are reported.

\*\*DACC = Income decreasing discretionary accruals; PISH = Total institutional ownership as a percentage of total shares outstanding; TRA = Transient institutional ownership as a percentage of total shares outstanding; LTPISH = Long-term oriented institutional ownership as a percentage of total shares outstanding; TRARELPISH = Transient institutional ownership relative to total institutional ownership, measured as TRA/PISH; SIZE = Natural logarithm of market value of equity (#25 \* #199); LEV = Ratio of total debt (#9 + #34) to total assets (#6); MKTBV = Market-to-book ratio (#25 \* #199)/(#216); EXPERF = Extreme earnings performance (1 if firm's ROA (#237/#6) is within the top decile, 0 otherwise); CFO = Cash flows from operations (#308) divided by sales (#12); EQISS = Amount of new equity issue (#108) divided by market value of equity (#25 \* #199); AUD = Auditor dummy variable (1 if audited by Big-6 auditors, 0 otherwise); AUDOP = Auditor's opinion (0 if a firm received a clean unqualified report, 1 otherwise)

The results also support the argument that long-term oriented institutions constrain portfolio firm managers' accruals discretion, i.e., there is a positive association between long-term oriented institutional ownership and income decreasing discretionary accruals (H2a). As such, the greater the level of long-term oriented institutional ownership, the smaller are portfolio firms' negative discretionary accruals. The estimated coefficient for LTPISH is positive and significant at the 0.1% level ( $p=0.0005$ ). The results also mean firms with high levels of long-term oriented institutional ownership have smaller negative discretionary accruals than firms with high levels of non-institutional ownership.

The comparative column results show that total institutional ownership (PISH) is not significantly related to income decreasing discretionary accruals. This is expected as transient and long-term oriented institutional ownership have opposing effects on income decreasing discretionary accruals. It also highlights the importance of considering the institutions' investment preferences when examining their association with portfolio firms' earnings management.

In contrast to the finding in Table 6.4, firm size (SIZE) is positively associated with income decreasing discretionary accruals ( $p=0.0000$ ). Explanations consistent with the political cost hypothesis may explain these two findings on firm size. First, when firms engage in income increasing discretionary accruals, managers of larger firms would prefer less positive discretionary accruals to avoid political attention by having high earnings levels. On the other hand, when firms engage in income decreasing discretionary accruals, managers of larger firms prefer less negative discretionary accruals. Managers of larger firms would prefer a smaller reduction to

their reported earnings *via* negative discretionary accruals, therefore avoiding unnecessary political attention, possibly as a result of poor earnings performance.

Consistent with the debt hypothesis, leverage (LEV) is associated with less income decreasing discretionary accruals ( $p < 0.001$ ). Market-to-book ratios (MKTBV) are associated with more income decreasing discretionary accruals ( $p = 0.0000$ ). This can be explained by the argument that if growth stocks will be punished when they under-perform, they might as well take a bath to create accounting slack for future periods, an outcome similar to the traditional “big bath” argument although in this instance, the incentives come from the capital market.<sup>96</sup> The expected negative relation between cash flows (CFO) and accruals is supported. Firms that received a qualified audit opinion (AUDOP) have less negative discretionary accruals, suggesting that auditors disapproved some less income decreasing discretionary accruals adopted by firms.

The amount of new equity issue (EQISS) is associated with more income decreasing discretionary accruals ( $p = 0.0000$ ), which means that the more new equity that is raised, the more negative are discretionary accruals. This is an interesting result as the existing literature predicts and finds that firms, on average, manage their discretionary accruals upward during the time of new equity issues (e.g., Rangan, 1998; Teoh et al., 1998b). However, during the periods where Rangan (1998) finds significant positive accruals management, around 41% of his sample engaged in negative discretionary accruals.<sup>97</sup> Rangan (1998) does not provide any explanation to this effect. It is likely that firms that issue new equity and engage in income

<sup>96</sup> Skinner and Sloan (1999) find that growth stocks (as proxied by market-to-book ratio) experience a much large negative share price reaction to earnings disappointment.

<sup>97</sup> There are no equivalent statistics provided by Teoh et al. (1998b) to perform any comparison.

decreasing discretionary accruals have other incentives to do so.<sup>98</sup> However, it is beyond the scope of this study to investigate the reasons for this negative association. The regression models explain around 13% of the variation in discretionary accruals.

#### **6.4 *Regression results: Associations between institutional ownership type and discretionary accruals conditional upon earnings targets***

Section 6.3 above examines the relations between institutional ownership types and income increasing (decreasing) discretionary accruals. This section analyses the relation between institutional ownership types and discretionary accruals conditional upon portfolio firms' earnings targets. Specifically, Section 6.4.1 reports the results in relation to firms that exceeded their earnings targets *via* positive discretionary accruals, that is "reversible decline" (RD) firms. Section 6.4.2 presents the results for firms that did not meet their earnings targets through discretionary accruals ("irreversible decline" (ID) firms) and finally results for firms with non-discretionary earnings that exceeded their earnings target ("increased" (IN) firms) are documented in Section 6.4.3.

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<sup>98</sup> As discussed in an earlier section, firms that engaged in income decreasing discretionary accruals, on average, had greater market-to-book ratio and cash flow performance, and lower return on assets than firms that engaged in income increasing discretionary accruals (see Table 6.1). These firm characteristics might provide some indications to the reasons underlying the negative relation between income decreasing discretionary accruals and new equity issues.

#### 6.4.1 Effects of institutional ownership type on “reversible decline” (RD) firms’ discretionary accruals

Table 6.6 presents the regression results for the association between institutional ownership types and discretionary accruals among “reversible decline” (RD) firms, that is, firms that managed to meet their earnings targets *via* positive discretionary accruals. Hypothesis 3 predicts that transient institutional ownership is positively associated with “reversible decline” (RD) firms’ discretionary accruals. The estimated coefficient for TRA is positive but is only significant at the 10% level ( $p=0.0527$ ).

Following Bushee (1998), the association between transient institutional ownership and discretionary accruals among “reversible decline” firms is further examined using an indicator variable, DQ5(TRA), to replace TRA in the regression analysis.<sup>99</sup> The results (not tabled) indicate that DQ5(TRA) is positive and significant at the 5% level ( $p=0.0315$ ), consistent with Bushee’s (1998) findings. This suggests that portfolio firms with a high proportion of ownership by transient institutions are significantly more likely to manage earnings upwards than (1) firms with low transient institutional ownership; and (2) firms with high non-institutional ownership. Consistent with the findings in Section 6.3.1, the positive association between “reversible decline” firms’ discretionary accruals and transient institutional ownership is stronger when the institutional ownership of portfolio firms is predominantly made up of transient institutional ownership.

<sup>99</sup> DQ5(TRA) takes a value of 1 when TRARELPISH falls within the top quintile and 0 otherwise, consistent with Bushee (1998).

**Table 6.6: Regression Analyses for “Reversible Decline” Sample Firms\***  
(Dependent Variable: DACC)

Variable**	Expected Sign	Model 8	Model 9	Comparative
Intercept		0.1717	0.1618	0.1732
<i>p-value</i>		0.0000	0.0000	0.0000
PISH	+/-		-0.0398	-0.0427
<i>p-value</i>			0.0000	0.0000
TRA	+	0.0596		
<i>p-value</i>		0.0527		
LTPISH	-	-0.0791		
<i>p-value</i>		0.0000		
TRARELPISH	+		0.0314	
<i>p-value</i>			0.0203	
SIZE	+/-	-0.0080	-0.0081	-0.0083
<i>p-value</i>		0.0000	0.0000	0.0000
LEV	+	0.0116	0.0102	0.0095
<i>p-value</i>		0.2401	0.2686	0.2845
MKTBV	+	0.0059	0.0059	0.0061
<i>p-value</i>		0.0000	0.0000	0.0000
EXPERF	+	0.0862	0.0867	0.0864
<i>p-value</i>		0.0000	0.0000	0.0000
CFO	-	-0.2453	-0.2449	-0.2489
<i>p-value</i>		0.0000	0.0000	0.0000
EQISS	+	0.2991	0.3016	0.3086
<i>p-value</i>		0.0000	0.0000	0.0000
AUD	-	-0.0213	-0.0209	-0.0224
<i>p-value</i>		0.0209	0.0231	0.0152
AUDOP	+	-0.0030	-0.0034	-0.0042
<i>p-value</i>		0.3351	0.3173	0.2735
Adjusted R <sup>2</sup>		0.3309	0.3298	0.3274
N		1504	1504	1504

\*p-values are derived from White (1980) corrected t-statistics. Reported p-values are one-tail if sign for the estimated coefficients is predicted, otherwise, two-tail p-values are reported.

\*\*DACC = Discretionary accruals; PISH = Total institutional ownership as a percentage of total shares outstanding; TRA = Transient institutional ownership as a percentage of total shares outstanding; LTPISH = Long-term oriented institutional ownership as a percentage of total shares outstanding; TRARELPISH = Transient institutional ownership relative to total institutional ownership, measured as TRA/PISH; SIZE = Natural logarithm of market value of equity (#25 \* #199); LEV = Ratio of total debt (#9 + #34) to total assets (#6); MKTBV = Market-to-book ratio (#25 \* #199)/(#216); EXPERF = Extreme earnings performance (1 if firm's ROA (#237/#6) is within the top decile, 0 otherwise; CFO = Cash flows from operations (#308) divided by sales (#12); EQISS = Amount of new equity issue (#108) divided by market value of equity (#25 \* #199); AUD = Auditor dummy variable (1 if audited by Big-6 auditors, 0 otherwise); AUDOP = Auditor's opinion (0 if a firm received a clean unqualified report, 1 otherwise)

The above results provide conditional support for the argument that transient institutional ownership creates incentives for portfolio firm managers to manage their discretionary accruals upward to meet their earnings targets (Hypothesis 3). In particular, transient institutional ownership is (1) positively associated with discretionary accruals among “reversible decline” firms at the 10% level; and (2) positively associated with discretionary accruals of “reversible decline” firms with predominantly transient institutional ownership at the 5% level.

A stronger result is found when the proportion of total institutional ownership owned by transient institutions is considered. The estimated coefficient for TRARELPISH is positive and significant ( $p=0.0203$ ). Given the marginal insignificance of the estimated coefficient for TRA and high significance of the estimated coefficient for LTPISH ( $p=0.0000$  for LTPISH, discussed below), the nature of the positive association between transient institutional ownership *relative* to total institutional ownership and discretionary accruals of “reversible decline” firms is dominated by the significant negative association between long-term oriented institutional ownership and discretionary accruals.

Hypothesis 4 assumes that long-term oriented institutional investors, through their monitoring of their portfolio firms, restrict portfolio firm managers’ discretion over accruals management. Thus, it predicts a negative relation between long-term oriented institutional ownership and “reversible decline” (RD) firms’ discretionary accruals. This hypothesised negative relation is supported. The estimated coefficient for LTPISH is negative and significant at the 0.01% level ( $p=0.0000$ ).<sup>100</sup>

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<sup>100</sup> Consistent with previous interpretations, the result also implies that “reversible decline” firms with high levels of long-term oriented institutional ownership have smaller income increasing discretionary accruals than firms with high levels of non-institutional ownership.



Institutional ownership as a whole (PISH) is negatively associated with “reversible decline” (RD) firms’ discretionary accruals ( $p=0.0000$ ) and is likely to be driven by the negative relation between long-term oriented institutional ownership and discretionary accruals among “reversible decline” (RD) firms.

Taken together, all the results above suggest that if the types of institutional ownership are not explicitly considered separately, researchers are likely to prematurely conclude that total institutional investment limits portfolio firm managers’ accruals discretion, overlooking the potential concurrent opportunistic effects of transient institutional investment on portfolio firm managers, especially when portfolio firms’ institutional ownership is predominantly comprised of transient institutions.

“Reversible decline” (RD) firm size (SIZE) is negatively associated with discretionary accruals ( $p=0.0000$ ), indicating that larger firms are less likely to incur income increasing discretionary accruals beyond their earnings targets, after those earnings targets are met. The “torpedo effects” suggested by Skinner and Sloan (1999) appear to exist among “reversible decline” (RD) firms where the estimated coefficient for market-to-book ratio (MKTBV) is positive and significant at the 0.01% level ( $p=0.0000$ ). Extreme earnings performance (EXPERF) is also associated with more aggressive accruals management ( $p=0.0000$ ). Similarly, the more new equity “reversible decline” firms issue (EQISS), the more likely they are to manage their reported earnings upward *via* discretionary accruals ( $p=0.0000$ ) to meet their earnings targets, similar to findings by Teoh et al. (1998b) and Rangan (1998). Firms with Big-6 auditors (AUD) engage in less aggressive accruals management ( $p<0.05$ ) consistent with the findings in Becker et al. (1998), and there

is a negative relation between accruals and cash flows (CFO;  $p=0.0000$ ). The regression models for “reversible decline” (RD) firms are able to explain about 33% of the variation in discretionary accruals.

#### **6.4.2 Effects of institutional ownership type on “irreversible decline” (ID) firms’ discretionary accruals**

Section 6.3.2 above reports a negative relation between transient ownership and income decreasing discretionary accruals (see Table 6.5), as predicted by hypothesis 1a. This preliminary evidence suggests that transient institutional investors create incentives for portfolio firm managers to engage in accruals management similar to “big bath” behaviour. However, an assumption implicit to hypothesis 1a is that portfolio firms that engage in income decreasing discretionary accruals failed to meet their earnings targets, and therefore managers have incentive to take a bath to create accounting slack for future periods. Examination of the relation between transient institutional ownership and discretionary accruals among “irreversible decline” (ID) firms enables a more accurate investigation of “big bath” effects by focusing only on firms that failed to meet their earnings targets.

Table 6.7 presents regression results focusing on “irreversible decline” (ID) firms. The estimated coefficients for TRA and TRARELPISH are insignificant ( $p=0.3768$

and 0.1821 respectively).<sup>101</sup> Thus, the results do not support the “big bath” prediction (H5).

An interpretation of the combined results from Table 6.5 and Table 6.7 might be that transient institutions create incentives for portfolio firm managers to have more negative discretionary accruals in general when portfolio firm managers decided to engage in income decreasing discretionary accruals (Table 6.5). However, transient institutional ownership does not lead portfolio firm managers to take a bath when falling short of firms’ earnings targets any more than other types of investors (Table 6.7). Such behaviour is not surprising, given the sample selection criteria of this study and the use of prior year earnings levels as firms’ earnings targets. In particular, although “irreversible decline” firms fail to meet their prior year earnings levels, there are strong capital market incentives for “irreversible decline” firm managers to avoid reporting losses (Degeorge et al., 1999). This is consistent with findings that avoiding losses is more important than meeting prior year earnings levels (Degeorge et al., 1999) and that the capital market punishes firms reporting losses (Barth et al., 1999). Therefore, the incentives to avoid losses create a lower bound as to how far “irreversible decline” firms will manage accruals downwards. Given that all the sample firms have successfully avoided reporting losses, this lower bound might potentially explain the lack of association between “bath-taking” behaviour and transient institutional ownership.

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<sup>101</sup> This also implies that transient institutional investors do not affect “irreversible decline” firms’ discretionary accruals any differently from firms with high levels of non-institutional ownership.

**Table 6.7: Regression Analyses for “Irreversible Decline” Sample Firms\***  
(Dependent Variable: DACC)

Variable**	Expected Sign	Model 8	Model 9	Comparative
Intercept		0.1070	0.1025	0.1079
<i>p-value</i>		0.0000	0.0000	0.0000
PISH	-		-0.0426	-0.0450
<i>p-value</i>			0.0014	0.0005
TRA	-	0.0226		
<i>p-value</i>		0.3768		
LTPISH	-	-0.0666		
<i>p-value</i>		0.0013		
TRARELPISH	-		0.0173	
<i>p-value</i>			0.1821	
SIZE	+/-	-0.0046	-0.0049	-0.0050
<i>p-value</i>		0.0033	0.0020	0.0019
LEV	+	0.0220	0.0220	0.0217
<i>p-value</i>		0.1086	0.1087	0.1120
MKTBV	-	0.0008	0.0008	0.0009
<i>p-value</i>		0.2728	0.2741	0.2650
EXPERF	+	0.0746	0.0749	0.0750
<i>p-value</i>		0.0012	0.0010	0.0011
CFO	-	-0.1344	-0.1323	-0.1337
<i>p-value</i>		0.0001	0.0001	0.0001
EQISS	+	0.1219	0.1215	0.1232
<i>p-value</i>		0.0362	0.0358	0.0349
AUD	-	-0.0268	-0.0270	-0.0270
<i>p-value</i>		0.0047	0.0044	0.0044
AUDOP	+	-0.0069	-0.0069	-0.0067
<i>p-value</i>		0.1831	0.1834	0.1916
Adjusted R <sup>2</sup>		0.1390	0.1383	0.1380
N		1039	1039	1039

\*p-values are derived from White (1980) corrected t-statistics. Reported p-values are one-tail if sign for the estimated coefficients is predicted, otherwise, two-tail p-values are reported.

\*\*DACC = Discretionary accruals; PISH = Total institutional ownership as a percentage of total shares outstanding; TRA = Transient institutional ownership as a percentage of total shares outstanding; LTPISH = Long-term oriented institutional ownership as a percentage of total shares outstanding; TRARELPISH = Transient institutional ownership relative to total institutional ownership, measured as TRA/PISH; SIZE = Natural logarithm of market value of equity (#25 \* #199); LEV = Ratio of total debt (#9 + #34) to total assets (#6); MKTBV = Market-to-book ratio (#25 \* #199)/(#216); EXPERF = Extreme earnings performance (1 if firm's ROA (#237/#6) is within the top decile, 0 otherwise; CFO = Cash flows from operations (#308) divided by sales (#12); EQISS = Amount of new equity issue (#108) divided by market value of equity (#25 \* #199); AUD = Auditor dummy variable (1 if audited by Big-6 auditors, 0 otherwise); AUDOP = Auditor's opinion (0 if a firm received a clean unqualified report, 1 otherwise)

The insignificant estimated coefficients for TRA and TRARELPISH (Table 6.7) also do not support the competing hypothesis that transient institutional ownership lead to portfolio firm managers smoothing their reported earnings towards firms' earnings targets when portfolio firms fail to meet their targets. The income smoothing argument predicts significant positive estimated coefficients for both variables.<sup>102</sup>

"Irreversible decline" (ID) firms also provide a unique circumstance to examine potential alternative effects of long-term oriented institutional ownership on portfolio firms' discretionary accruals. Hypothesis 6 predicts a "reverse" myopic effect of long-term oriented institutional ownership among firms that fail to achieve their earnings targets. In particular, a negative association between long-term oriented institutional ownership and discretionary accruals among "irreversible decline" (ID) firms is predicted. From Table 6.7, the estimated coefficient for LTPISH is negative and significant at the 1% level ( $p=0.0013$ ) supporting hypothesis 6.<sup>103</sup> This result suggests that there is a conservative bias in long-term oriented institutional investors' constraints on portfolio firm managers' accruals discretion.

The combined results from Tables 6.4, 6.5 and Table 6.7 can be interpreted as: long-term oriented institutional investors on average constrain portfolio firm managers' accruals management through their involvement in the portfolio firms (results from Tables 6.4 and 6.5). However, when portfolio firms fail to meet their earnings targets, the presence of long-term oriented institutional investors and their monitoring activities can lead managers of portfolio firms to engage in conservative

<sup>102</sup> Although both estimated coefficients for TRA and TRARELPISH are insignificant, both of them are consistently positive indicating that when portfolio firms failed to meet their earnings targets, managers might have incentive to smooth reported earnings.

<sup>103</sup> As noted in Chapter 3, "reverse" myopia and "big bath" arguments both lead to the same outcome and hence are empirically indistinguishable. The observed negative relation between long-term oriented institutional ownership and discretionary accruals among ID firms can be attributable to either argument. However, it is beyond to scope of this study to distinguish the two.

(“reverse” myopic) accruals management (Table 6.7). It is important to note, however, that even though long-term oriented institutional investors appear to be associated with “reverse” myopic accruals management among “irreversible decline” firms, the “irreversible decline” firms in this sample are still able to avoid reporting losses (Degeorge et al., 1999).<sup>104</sup>

Other factors that are significantly associated with “irreversible decline” (ID) firms’ discretionary accruals include firm size (SIZE, negative and significant at the 1% level), extreme earnings performance (EXPERF, positive and significant at the 1% level), cash flows from operations (CFO, negative and significant at the 1% level), amount of new equity issues (EQISS, positive and significant at the 5% level), and Big-6 auditors designation (AUD, negative and significant at the 1% level). The regression models for “irreversible decline” (ID) firms explain around 14% of the variation in discretionary accruals.

#### **6.4.3 Effects of institutional ownership type on “increased” (IN) firms’ discretionary accruals**

“Increased” (IN) firms are firms that meet or exceed their earnings targets prior to accruals management. That is, “increased” (IN) firms can meet their earnings targets without managing their accruals. In general, the different types of institutional ownership are not expected to affect discretionary accruals of “increased” (IN) firms. This expectation is consistent with the results reported in Table 6.8 where the estimated coefficients for all the institutional ownership variables TRA,

<sup>104</sup> The sample selection criteria omit firms that report losses.

TRARELPISH, LTPISH and PISH are insignificant.<sup>105</sup> That is, institutional investors, regardless of type, do not affect “increased” firms’ discretionary accruals any differently from firms with high levels of non-institutional investors.

The estimated coefficient for auditor’s opinion is significantly positive ( $p=0.0001$ ) suggesting that “increased” (IN) firms that received a qualified audit opinion are overly aggressive in their accruals management strategies.

However, a further partition of “increased” (IN) firms allows a closer examination of any potential incentives created by different types of institutional investors for their portfolio firm managers to engage in income smoothing behaviour (H7 and H8). The income smoothing argument predicts a negative relation between transient (and long-term oriented) institutional ownership and the discretionary accruals of “increased” (IN) firms with an increase in current year reported earnings. The results do not support the argument that institutional investors (regardless of which types of institutional investor they are) encourage portfolio firm managers to smooth reported earnings (Table 6.9). The estimated coefficients for all the institutional ownership measures TRA, TRARELPISH, LTPISH and PISH, are insignificant.

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<sup>105</sup>

The estimated coefficient for indicator variable, DQ5(TRA), is insignificant at the conventional levels.

**Table 6.8: Regression Analyses for “Increased” Sample Firms\* (Dependent Variable: DACC)**

Variable**	Expected Sign	Model 8	Model 9	Comparative
Intercept		-0.0009	-0.0012	-0.0010
<i>p-value</i>		0.9342	0.9136	0.9278
PISH	Insignificant		-0.0105	-0.0106
<i>p-value</i>			0.2074	0.2028
TRA	Insignificant	-0.0147		
<i>p-value</i>		0.6296		
LTPISH	Insignificant	-0.0091		
<i>p-value</i>		0.4268		
TRARELPISH	Insignificant		0.0006	
<i>p-value</i>			0.9593	
SIZE	+/-	0.0030	0.0030	0.0030
<i>p-value</i>		0.0126	0.0116	0.0115
LEV	+	0.0332	0.0334	0.0334
<i>p-value</i>		0.0024	0.0022	0.0022
MKTBV	+	-0.0013	-0.0013	-0.0013
<i>p-value</i>		0.0200	0.0201	0.0201
EXPERF	+	0.0670	0.0670	0.0670
<i>p-value</i>		0.0000	0.0000	0.0000
CFO	-	-0.2789	-0.2790	-0.2789
<i>p-value</i>		0.0000	0.0000	0.0000
EQISS	+	0.0227	0.0223	0.0224
<i>p-value</i>		0.2305	0.2352	0.2337
AUD	-	-0.0183	-0.0183	-0.0183
<i>p-value</i>		0.0224	0.0224	0.0224
AUDOP	+	0.0223	0.0224	0.0224
<i>p-value</i>		0.0001	0.0001	0.0001
Adjusted R <sup>2</sup>		0.1444	0.1444	0.1447
N		2719	2719	2719

\*p-values are derived from White (1980) corrected t-statistics. Reported p-values are one-tail if sign for the estimated coefficients is predicted, otherwise, two-tail p-values are reported.

\*\*DACC = Discretionary accruals; PISH = Total institutional ownership as a percentage of total shares outstanding; TRA = Transient institutional ownership as a percentage of total shares outstanding; LTPISH = Long-term oriented institutional ownership as a percentage of total shares outstanding; TRARELPISH = Transient institutional ownership relative to total institutional ownership, measured as TRA/PISH; SIZE = Natural logarithm of market value of equity (#25 \* #199); LEV = Ratio of total debt (#9 + #34) to total assets (#6); MKTBV = Market-to-book ratio (#25 \* #199)/(#216); EXPERF = Extreme earnings performance (1 if firm's ROA (#237/#6) is within the top decile, 0 otherwise; CFO = Cash flows from operations (#308) divided by sales (#12); EQISS = Amount of new equity issue (#108) divided by market value of equity (#25 \* #199); AUD = Auditor dummy variable (1 if audited by Big-6 auditors, 0 otherwise); AUDOP = Auditor's opinion (0 if a firm received a clean unqualified report, 1 otherwise)



**Table 6.9: Regression Analyses for “Increased” Sample Firms Reporting an Increase in Earnings\* (Dependent Variable: DACC)**

Variable**	Expected Sign	Model 8	Model 9	Comparative
Intercept		0.0176	0.0164	0.0173
<i>p-value</i>		0.1208	0.1565	0.1260
PISH	-		-0.0106	-0.0108
<i>p-value</i>			0.2535	0.1225
TRA	-	-0.0246		
<i>p-value</i>		0.2297		
LTPISH	-	-0.0052		
<i>p-value</i>		0.3448		
TRARELPISH	-		0.0029	
<i>p-value</i>			0.4135	
SIZE	+/-	0.0020	0.0021	0.0020
<i>p-value</i>		0.1419	0.1190	0.1213
LEV	+	0.0293	0.0298	0.0297
<i>p-value</i>		0.0148	0.0131	0.0132
MKTBV	+	-0.0011	-0.0011	-0.0011
<i>p-value</i>		0.0584	0.0550	0.0554
EXPERF	+	0.0638	0.0634	0.0636
<i>p-value</i>		0.0000	0.0000	0.0000
CFO	-	-0.3068	-0.3072	-0.3071
<i>p-value</i>		0.0000	0.0000	0.0000
EQISS	+	0.0315	0.0300	0.0305
<i>p-value</i>		0.1613	0.1743	0.1693
AUD	-	-0.0225	-0.0225	-0.0225
<i>p-value</i>		0.0087	0.0087	0.0087
AUDOP	+	0.0275	0.0276	0.0276
<i>p-value</i>		0.0000	0.0000	0.0000
Adjusted R <sup>2</sup>		0.1557	0.1556	0.1559
N		2329	2329	2329

\*p-values are derived from White (1980) corrected t-statistics. Reported p-values are one-tail if sign for the estimated coefficients is predicted, otherwise, two-tail p-values are reported.

\*\*DACC = Discretionary accruals; PISH = Total institutional ownership as a percentage of total shares outstanding; TRA = Transient institutional ownership as a percentage of total shares outstanding; LTPISH = Long-term oriented institutional ownership as a percentage of total shares outstanding; TRARELPISH = Transient institutional ownership relative to total institutional ownership, measured as TRA/PISH; SIZE = Natural logarithm of market value of equity (#25 \* #199); LEV = Ratio of total debt (#9 + #34) to total assets (#6); MKTBV = Market-to-book ratio (#25 \* #199)/(#216); EXPERF = Extreme earnings performance (1 if firm's ROA (#237/#6) is within the top decile, 0 otherwise; CFO = Cash flows from operations (#308) divided by sales (#12); EQISS = Amount of new equity issue (#108) divided by market value of equity (#25 \* #199); AUD = Auditor dummy variable (1 if audited by Big-6 auditors, 0 otherwise); AUDOP = Auditor's opinion (0 if a firm received a clean unqualified report, 1 otherwise)

As explained in Section 3.6.1, “increased” (IN) firms with an increase in current year reported earnings can include firms with positive, zero or negative discretionary accruals. The income smoothing hypothesis would predict that “increased” (IN) firms with an increase in reported earnings would engage in negative discretionary accruals. Additional tests are carried out to examine only “increased” (IN) firms with an increase in reported earnings that have negative discretionary accruals (not tabled). This creates a sub-sample of portfolio firms that include only “increased” firms that exhibited discretionary accrual behaviour consistent with income smoothing. The estimated coefficient for TRA and TRARELPISH are both negative and significant at the 0.1% level ( $p=0.0009$ , and  $0.0006$  respectively), thus providing some support for the income smoothing argument for transient institutional investors in a very restricted subset of firms. Total institutional ownership (PISH) is not significantly associated with negative discretionary accruals of these firms ( $p=0.3166$ ). Therefore, these results provide only limited support for Carlson and Bathala’s (1997) contention that transient institutional investment encourages income smoothing behaviour.

Interestingly, the estimated coefficient for long-term oriented institutional ownership (LTPISH) is positive and significant at the 0.1% level ( $p=0.0002$ ) for this very restricted sub-sample. This result is unexpected and opposite to the prediction of income smoothing behaviour. Further tests (not reported) on “increased” (IN) firms with an increase in reported earnings but with *positive* discretionary accruals reveal that the estimated coefficient for LTPISH is negative and significant at the 1% level ( $p=0.0028$ ). Combining these two findings on the association between long-term oriented institutional ownership and “increased” (IN) firms’ (that reported an increase in earnings) positive and negative discretionary accruals, an interpretation

similar to H1a and H2a is possible. That is, long-term oriented institutional investors do not encourage income smoothing behaviour among “increased” (IN) firms that reported an increase in current year earnings; rather their presence restricts the accruals management exercised by managers of these firms.

## **6.5 Robustness tests**

This section reports the various sensitivity tests conducted to ensure that the preceding results are robust. Specifically, Section 6.5.1 examines whether excluding observations with estimated discretionary accruals around zero affects the primary results found above. The effects of alternative institutional ownership measures are then examined in Section 6.5.2. Section 6.5.3 reports the analysis performed to ensure the preceding results are not driven by firm size. Finally, the effects of accounting flexibility available to portfolio firm managers on the primary results are examined in Section 6.5.4.

### **6.5.1 Excluding observations with estimated discretionary accruals around zero**

Given the nature of the hypotheses in this thesis, the robustness of the results reported above depends upon the direction of the estimated discretionary accruals. To ensure that the reported results are not a product of measurement errors arising out of the discretionary accruals estimation process, observations with estimated

discretionary accruals around zero are excluded. Three separate cut-off points are adopted since there is no existing literature to guide their selection. First, observations with estimated discretionary accruals that fall between  $-0.01\%$  and  $0.01\%$  of prior year total assets are omitted. The next cut-off criterion excludes observations with estimated discretionary accruals between  $-0.1\%$  and  $0.1\%$  of prior year total assets. Finally, observations with estimated discretionary accruals that fall between  $-1\%$  and  $1\%$  of prior year total assets are excluded.<sup>106</sup>

Trimming observations with estimated discretionary accruals around zero excludes observations that are most susceptible to misclassification (based on estimated discretionary accruals), thus enhancing the validity of the results reported in the above sections. The unreported results indicate that, regardless of the cut-off criteria used, all findings are consistent with those reported in Tables 6.4 to 6.9. Thus, the earlier results found are unlikely to be a product of measurement errors in estimated discretionary accruals.

### **6.5.2 Alternative measure of institutional ownership**

In calculating their institutional ownership measures, Bushee (1998) and Majumdar and Nagarajan (1997) use the ownership measures at the end of the third quarter and at the beginning of the years, respectively. Bushee (1998) assumes that managers of investee firms would have a better knowledge of the expected earnings during the last quarter and begin to consider their earnings management strategies. Similarly,

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<sup>106</sup> The cut-off point stops at  $1\%$  of prior year total assets as it is considered economically significant and is unlikely to be solely due to measurement error in the discretionary accruals estimation process. Furthermore, the sample firms have average estimated discretionary accruals of around  $3.3\%$  of prior year total assets (see Table 6.1).

Majumdar and Nagarajan (1997, 48) argue that firms are expected to adjust their “long-term strategic predispositions as a result of the presence of [institutional] investors” during this period of time. This consideration is more relevant to both of the studies, which investigate institutional ownership effects on R&D spending, since the R&D investment decision process generally requires more time than the accruals management decision process. In contrast, when accruals manipulation is used as an earnings management technique, such lagging is unlikely to be necessary.<sup>107</sup>

However, as a sensitivity test, all the tests are re-run using institutional ownership measured at the end of third quarter to ensure the robustness of the findings of this study. All the results (not reported) are qualitatively similar to those reported in Tables 6.4 to 6.9 except that stronger results are found in support of the transient institutional ownership association with aggressive discretionary accruals management among “reversible decline” firms (H3). The significance of the estimated coefficient of TRA improves from  $p=0.0527$  (Table 6.6) to  $p=0.0112$  (not reported), whilst the significance of the estimated coefficient of TRARELPISH improves from  $p=0.0203$  (see Table 6.6) to  $p=0.0000$  (not reported). Thus, conclusions reached in preceding sections hold, regardless of whether institutional ownership is measured at the end of third or fourth quarter.

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In a similar study where discretionary accruals are used as a proxy for earnings management, Rajgopal and Venkatachalam (1998) do not lag their institutional ownership measures when investigating the relation between institutional ownership and discretionary accruals.

### **6.5.3 Further examination of size effects**

Sloan (1996) finds evidence suggesting a non-linear (quadratic) relation between firm size and total accruals. To examine whether this non-linearity between firm size and accruals affects the findings on the relation between types of institutional ownership and discretionary accruals, all the models are re-estimated by including an additional variable,  $SIZE^2$ . The estimated coefficients of the relevant institutional ownership variables are qualitatively the same except for transient institutional ownership variables for the “reversible decline” sample (H3). In particular, the estimated coefficients for both TRA and TRARELPISH become more significant when the non-linearity relation between firm size and discretionary accruals are considered.

### **6.5.4 The effects of accounting flexibility available to managers**

Managers’ accruals management strategies are likely to be affected by past earnings management decisions. Exercise of accounting discretion in prior years can limit the discretion available to managers in the current year. For example, Sweeney (1994) investigates whether managers’ accounting responses to technical default are conditional upon the imposition of default costs by creditors and the availability of accounting flexibility. Sweeney’s definition of accounting flexibility is, among other things, conditional upon the prior year’s accounting procedure choice. Her results support her hypothesis that “managers of firms having accounting flexibility and bearing default costs are more likely to make income-increasing accounting changes in response to tightening debt-covenant constraints than managers of firms not

having accounting flexibility and/or not bearing default costs” (p.302). In addition, since accruals are mean-reverting (see Dechow, 1994; Sloan, 1996), the effects of prior periods’ accruals management decisions can affect current period accruals management decisions. Sloan (1996) documents that firms with unusually large (small) accruals in the current period tend to have lower (higher) accruals in the following periods.

Therefore, it is important to investigate the potential constraints imposed on current year accruals discretion as a result of prior year accrual decisions. In particular, if such constraints exist primarily among firms with high long-term oriented institutional ownership, then a negative (positive) relation between long-term oriented institutional ownership and income increasing (decreasing) discretionary accruals may be alternatively explained by the lack of accruals discretion available to portfolio firm managers rather than explained by the constraining effects of long-term oriented institutional ownership. In contrast, if a significant positive (negative) relation between transient institutional ownership and income increasing (decreasing) discretionary accruals is observed even when managers of portfolio firms have only limited discretion over accruals management, this will further enhance the transient institutional investor arguments.

The effects of prior periods’ accruals management on the level of discretion available to managers for current period accruals is captured by the prior year’s current accruals (CACCLAG). Consistent with the cash flow approach to measuring total accruals, current accruals is measured as, (Increase in accounts receivable (item 302) + Increase in inventory (item 303) + Decrease in accounts payable (item 304) + Decrease in income taxes accrued (item 305) + Increase (Decrease) in assets

(liabilities)-other (item 307)) scaled by prior year total assets. Current accruals are used because Sloan (1996) finds that variation in accruals is primarily attributable to the current asset component of accruals, and that current accruals can better capture the variation in accruals when the current asset and current liability components of accruals change disproportionately. Furthermore, Sloan (1996) and Bradshaw et al. (1999) find that the majority of the current accruals reverse themselves within the first year immediately after they were incurred.<sup>108</sup> The greater the prior year's current accruals, the more managers are constrained by the effects of prior year accruals management decisions in the current year.

In addition to using the continuous measure of prior year current accruals (CACCLAG) to capture the effects of prior accrual decisions on current year discretionary accruals, two discrete variables are introduced. The first discrete variable aims to capture the lack of discretion over accruals in the current year as a result of prior year accounting decisions, LOWFLEX, which takes a value of 1 if CACCLAG is in the top decile and 0 otherwise. The second discrete variable aims at capturing the high accruals flexibility available to managers of portfolio firms, HIFLEX. It takes the value of 1 if CACCLAG is in the lowest decile and 0 otherwise.

All the tests are re-run by including these three variables individually as well as in combination to examine whether the impacts of types of institutional ownership on portfolio firms' discretionary accruals are affected by accruals flexibility available to portfolio firm managers. The results for long-term oriented institutional ownership

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<sup>108</sup> Sloan's (1996) study covers the pre-FAS 95 period while Bradshaw et al. (1999) cover the post-FAS 95 period. The results from Sloan (1996) and Bradshaw et al. (1999) indicate that the mean-reversion behaviour of accruals remains relatively constant between 1962 and 1997.



remain unchanged. While the results for transient institutional ownership are largely unchanged, the only difference is the findings among “reversible decline” firms (H3). When accounting flexibility is controlled for, transient institutional ownership does not appear to affect “reversible decline” firms’ discretionary accruals. Therefore, there is only limited support for the arguments that transitory investment by institutional investors creates incentives for portfolio firm managers to manage their earnings for short-term gains.

## 6.6 *Summary and conclusion*

This chapter examines empirical evidence testing the hypothesised relations between institutional ownership types and discretionary accruals. The results of the analysis support the contention that long-term oriented institutional investors play an active role in portfolio firms’ governance through their monitoring activities and constrain portfolio firm managers from engaging in excessive discretionary accruals. In particular, long-term oriented institutional ownership is found to be negatively (positively) associated with income increasing (decreasing) discretionary accruals. This constraining effect is also evident among portfolio firms that have greatest incentives to manage their earnings aggressively (*viz.*, “reversible decline” firms).<sup>109</sup> These findings are unlikely to be an effect of measurement error in discretionary accruals, and are robust to different measures of institutional ownership, different specifications of the relation between discretionary accruals and firm size, and the effects of accounting flexibility available to portfolio firm managers.

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<sup>109</sup> This constraining effect of long-term oriented institutional investment is also apparent among “increased” firms that reported an increase in current year earnings and with positive discretionary accruals.

In addition to the constraining effects long-term oriented institutional ownership appear to have on portfolio firms' discretionary accruals, an alternative influence of long-term oriented institutional ownership on portfolio firm managers' accruals management is also found under specific circumstances. In particular, for portfolio firms that face an inevitable failure to meet their earnings target, long-term oriented institutional ownership is found to be negatively associated with discretionary accruals. This is consistent with the hypothesised "reverse" myopic behaviour induced by such institutional ownership.<sup>110</sup>

The "reverse" myopia is consistently found in various robustness tests, and contradicts the existing understanding that long-term oriented institutional investors have a long time horizon orientation in relation to their investment in portfolio firms. The observed "reverse" myopic behaviour among portfolio firms may suggest there is a conservative bias in long-term oriented institutional investors' constraints on portfolio firm managers' accruals discretion. Given that the current literature has not specifically examined the "reverse" myopic effects of long-term oriented institutional ownership, further research into this observation is required to understand the reasons underlying such effects. It will be interesting for future studies to investigate whether this apparent association between long-term oriented institutional ownership and conservatism affects earnings quality, thus reducing the capacity of reported earnings to convey private information.

There is no evidence indicating that long-term oriented institutional ownership encourages income smoothing behaviour among portfolio firms.

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<sup>110</sup> As discussed in previous chapter, "reverse" myopia and "big bath" arguments both lead to the same outcome and are impossible to distinguish empirically. This study does not attempt to distinguish the two as it is beyond its scope.

The evidence concerning the relations between transient institutional ownership and portfolio firm discretionary accruals is less conclusive. The negative relation between transient institutional ownership and income decreasing discretionary accruals is robust and consistent with transitory investment by institutional investors creating incentives for managers of portfolio firms to engage in myopic accruals management to create accounting slack for future periods. However, the hypothesised positive relation between transient institutional ownership and income increasing discretionary accruals is not evident. Similar to Bushee (1998), the association between transient institutional ownership and aggressive accruals management is more robust and consistent when transient institutional ownership dominates portfolio firms' institutional ownership.

When the transient investor hypothesis is tested in an environment where it should be most pronounced (among "reversible decline" firms), the predicted relation is only significant at the 10% level in the main test. However, for "reversible decline" firms with a high proportion of ownership by transient institutions, the transient investor hypothesis is supported at the 5% level. When constraints on the accounting flexibility available to portfolio firm managers are considered, no support is found for the transient investor hypothesis. Similar to Bushee (1998), overall evidence of the short-term effects of transient institutional investment is more consistent and robust when total institutional ownership is predominantly made up of transient institutional ownership. Therefore, there is only limited support for the arguments that transient institutional investors encourage managerial myopia.

Evidence on the association between transient institutional ownership and income smoothing by portfolio firm managers is very limited. Such association is only

found within a very restricted sub-sample. Finally, transient institutional ownership is not found to be associated with “big bath” behaviour although this might be alternatively explained by the inherent characteristics of the sample firms, since the sample excludes loss-making firms.

The results of this study highlight the importance of examining different types of institutional ownership separately when investigating the effects of institutional ownership on firms’ earnings management. The study also provides evidence indicating the alternative effects of institutional ownership types on firms’ discretionary accruals, conditional upon the position of firms’ non-discretionary earnings relative to their earnings targets. The overall results provide evidence indicating the complexities implicit to the effects of institutional ownership types on portfolio firms’ accruals management strategies. Also, the findings on the relation between transient institutional ownership and earnings management indicate that transient institution-induced managerial myopia may not be as prevalent, on average, as posited by critics (e.g., Black 1998, Black and Coffee, 1994; Coffee, 1991; Levitt, 1998; Porter, 1992).

## **7 Summary and Conclusion**

### **7.1 *Introduction***

The preceding chapter reports the results for hypothesis tests and robustness tests. This chapter summarizes and concludes the thesis. It begins with a brief review of the purpose and motivation of the study in Section 7.2. Section 7.3 outlines the structure of the thesis. Section 7.4 presents a summary of the major findings of this study while Section 7.5 discusses their implications. Section 7.6 details this study's limitations and is followed by Section 7.7, which suggests some future research avenues. Finally, Section 7.8 concludes the chapter.

### **7.2 *Purpose and motivation***

The purpose of this study is to examine the relations between institutional investor type and portfolio firms' accruals management. First, this study examines the relations between institutional investor type and portfolio firms' discretionary accruals separately for portfolio firms with income increasing and income decreasing discretionary accruals. The relations between institutional ownership type and accruals management are then examined to determine whether the nature of these relations depends upon the position of portfolio firms' pre-managed earnings relative to their earnings targets. Examining portfolio firm managers' earnings management conditional upon earnings targets allows tests for the different incentives created by the two types of institutional investors where these incentives are most likely to

present. As such, accruals management to achieve different objectives can be investigated (e.g., aggressive, “big bath”, income smoothing).

This study is motivated by several factors. First, there is heightened interest in the corporate governance role of institutional investors in their portfolio firms as a result of the surge in institutional ownership among public firms over the past decade. Depending on their investment horizon, prior research argues that institutional investors can either encourage myopic managerial behaviour among portfolio firm managers (e.g., Bhidé, 1993; Froot, Perold and Stein, 1992; Porter, 1992) or actively monitor their portfolio firms, thus constraining portfolio firm managers’ accruals discretion (e.g., Bange and De Bondt, 1998; Bushee, 1998; Majumdar and Nagarajan, 1997; Rajgopal and Venkatachalam, 1998). Therefore, the manner in which different types of institutional investors affect portfolio firms’ accruals management is an interesting empirical question.

The rise of interests in the corporate governance role of institutional investors among their portfolio firms has led to a growing body of research examining the success of institutional activism (Black, 1998; and Karpoff, 1998 review the recent studies on this line of investigation). However, many of these studies use accounting-based performance measures as indicators of the success of institutional monitoring. If different types of institutional ownership affect portfolio firms’ earnings management strategies, then accounting-based measures of performance are unlikely to be an accurate reflection of the success of institutional activism. This study can thus provide empirical evidence to indicate whether researchers should adjust accounting-based measures of performance when investigating the success of institutional activism using these measures.

Most of the existing studies have used the overall level of institutional ownership when investigating the relations between institutional ownership and portfolio firms' earnings management, thus obscuring the potential differential effects of institutional ownership type on portfolio firms' earnings management decisions (see e.g., Majumdar and Nagarajan, 1997; Rajgopal and Venkatachalam, 1998). By explicitly modelling institutional investor type, this study is able to more accurately test the relations between institutional ownership types and accruals management. As such, it is able to provide more direct evidence on the influence of ownership by different types of institutional investors on portfolio firms' accruals management.

Furthermore, the only known study that explicitly models different types of institutional investors examines the relation between institutional ownership type and earnings management in the context of earnings management through real investment in R&D (Bushee, 1998). There has been very limited evidence on whether Bushee's (1998) findings are generalisable to firms without R&D activities and/or firms that manage their earnings *via* accruals. While two other studies investigate the relation between institutional ownership and earnings management through accounting choice (namely, discretionary accruals), they either use an overall institutional ownership measure with no distinction made between different types institutional investors (Rajgopal and Venkatachalam, 1998), or a crude partition of blockholders *versus* non-blockholders (Cheng and Reitenga, 2000) to test the influence of different types of institutional investors on portfolio firms' discretionary accruals.

Last but not least, Dechow and Skinner (2000), in an attempt to reconcile the differential views of earnings management between accounting academics,

practitioners and regulators, encourage academics' research efforts to focus more on capital market incentives for earnings management given the increased sensitivity of managers to the level of their firms' stock prices and stock price relation to key accounting numbers such as earnings. Consistent with their call, this study attempts to combine both the traditional contracting incentives and capital market incentives in investigating the relation between institutional ownership type and earnings management.

### 7.3 *Thesis organisation*

Chapter 1 introduces this thesis, with the next two chapters analysing the relations between different types of institutional investors and portfolio firms' accruals management. Chapter 2 begins by exploring the institutional investor's role in corporate governance. It then analyses and develops hypotheses predicting the *general* relations between different types of institutional investors and income increasing (decreasing) earnings management, without specific reference to earnings targets. Chapter 3 extends the analysis by explicitly examining portfolio firm managers' earnings management incentives conditional upon the portfolio firms' earnings targets. Therefore, Chapter 2 provides the *general* background for an understanding of the relation between types of institutional investors and income increasing (decreasing) discretionary accruals; whereas analysis in Chapter 3 enables a more specific understanding of the potentially complex earnings management incentives created by different types of institutional investors.



Chapter 4 details the scheme and process of classifying institutional investors into transient and long-term oriented investors. Chapter 5 outlines the research design for testing the hypotheses of this study while Chapter 6 presents the results of the empirical tests.

#### **7.4 *Summary of major findings***

Overall, the results support most of the hypothesised relations between long-term oriented institutional ownership and portfolio firms' discretionary accruals (H2, H2a, H4 and H6). However, there is no evidence suggesting that long-term oriented institutional ownership encourages income smoothing behaviour (H8). More specifically, the results show that long-term oriented institutional ownership is negatively (positively) associated with income increasing (decreasing) discretionary accruals, consistent with the contention that long-term oriented institutional investors actively involve in monitoring their portfolio firms, thus constraining portfolio firm managers' accruals discretions. This constraining effect is also evident among the portfolio firms that have greatest incentives to manage their earnings aggressively (*viz.*, "reversible decline" firms).

In addition to the constraining effect long-term oriented institutional investors have on their portfolio firm managers, long-term oriented institutional ownership is found to associate with "reverse" myopic behaviour among portfolio firms that face an inevitable failure to meet their earnings targets (*viz.*, "irreversible decline" firms). These findings are unlikely to be an effect of measurement error in discretionary accruals, and are robust to different measures of institutional ownership and different

specification of the relation between discretionary accruals and firm size. The results on the relations between long-term oriented institutional ownership and discretionary accruals suggest there is a conservative bias in long-term oriented institutional investors' constraints on portfolio firm managers' accruals discretion.

The results on the relations between transient institutional ownership and portfolio firms' discretionary accruals are less conclusive. The negative relation between transient institutional ownership and income decreasing discretionary accruals is robust and consistent with transitory investment by institutional investors creating incentives for managers of portfolio firms to engage in myopic accruals management to create accounting slack for future periods. However, the hypothesised positive relation between transient institutional ownership and income increasing discretionary accruals is not evident. Similar to Bushee (1998), the association between transient institutional ownership and aggressive accruals management is more robust and consistent if transient institutional ownership dominates portfolio firms' institutional ownership.

When the transient investor hypothesis is tested in an environment where it should be most pronounced (among "reversible decline" firms), the predicted relation is only significant at the 10% level in the main test. However, for "reversible decline" firms with a high proportion of ownership by transient institutions, the transient investor hypothesis is supported at the 5% level. When constraints on the accounting flexibility available to portfolio firm managers are considered, no support is found for the transient investor hypothesis. Similar to Bushee (1998), overall evidence of the short-term effects of transient institutional investment is more consistent and robust when total institutional ownership is predominantly made up of transient

institutional ownership. Therefore, the impact of transient institutional ownership on earnings management, in general, may not be as severe as has been suggested (e.g., Black 1998, Black and Coffee, 1994; Coffee, 1991; Levitt, 1998).

Evidence on the association between transient institutional ownership and income smoothing by portfolio firm managers is very limited. Such association is only found within a very restricted sub-sample. Finally, transient institutional ownership is not found to be associated with “big bath” behaviour although this might be alternatively explained by the inherent characteristics of the sample firms, where the sample excludes loss-making firms.

### ***7.5 Implications of the study***

This study has several implications. First, it provides empirical evidence of the differential influence of institutional investors on portfolio firms' earnings management strategies. Since long-term oriented institutional investors have a conservative bias in influencing portfolio firms' earnings management, studies on the success of institutional activism that use accounting-based performance benchmarks without any adjustment are likely to suffer a downward bias on these performance benchmarks (see e.g., Black, 1998; Karpoff, 1998). This may explain the lack of evidence in the existing literature to indicate that institutional monitoring leads to an improved performance in target firms when accounting-based performance measures are used as performance benchmarks (Karpoff, 1998).

The empirical evidence of this study also suggests that studies that do not distinguish between the influences of different types of institutional investors on their portfolio firms are potentially over-simplified in design and are likely to be incapable of capturing these differential influences. This implication is not restricted to studies on the relation between institutional ownership type and earnings management. For example, transient and long-term oriented institutional ownership may have different influences on board composition, audit committee composition, strength of internal control, or governance structure in general.<sup>111</sup>

By combining the traditional contracting incentives and capital market incentives in developing its hypotheses, this study is able to predict different portfolio firms' accruals management strategies associated within each type of institutional ownership, namely transient and long-term oriented institutional ownership, conditioned upon portfolio firms' non-discretionary earnings levels relative to earnings targets. This approach provides richer contexts to examine the complex web of incentives faced by portfolio firm managers in making their earnings management decisions.

While recent studies have found evidence of income smoothing in various contexts (e.g., Carlson and Bathala, 1997; DeFond and Park, 1997; Gaver et al., 1995), this study's empirical tests yields very little, if any, support for income smoothing being associated with institutional ownership types. The distinguishing factor between this study and previous income smoothing studies is that income smoothing behaviour is tested among sample firms that can be unambiguously attributed to income smoothing incentives, if such behaviour is found, rather than a combination of

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<sup>111</sup> These aspects were not examined in this thesis partly because they fall outside its scope, but also because data constraints.

incentives which include income smoothing.<sup>112</sup> In particular, these sample firms exclude (a) those firms that may have been classified as income smoothers by existing income smoothing studies, but in fact can also be responding to capital market incentives to avoid missing their earnings targets (see e.g., Barth et al., 1999; Burgstahler and Dichev, 1997; Dechow and Skinner, 2000; Levitt, 1998; Myer and Skinner, 1999); and (b) firms that appear to smooth earnings downwards to such an extent that they miss their earnings targets and defeat the purpose of income smoothing to enhance firm values (Ronen and Sadan, 1981). This raises the concern that existing evidence on income smoothing might be driven by including firms that behave like income smoothers but also consistently with other incentives such as capital market incentives. It might be appropriate for future income smoothing studies to create a sample that enable unambiguous attribution of the results, if found, to income smoothing incentives.

The results also suggest that the association between transient institutional investors and portfolio firms' managerial myopia is not restricted to firms with R&D activities (Bushee, 1998). Such myopia is manifested through real investment earnings management (Bushee, 1998) as well as through accounting choice earnings management. This study's results provide evidence that transient institutional ownership is associated with more aggressive accruals management by portfolio firms. However, this association is stronger among portfolio firms with ownership predominantly comprised of transient institutional ownership, consistent with Bushee's (1998) findings. Furthermore, long-term oriented institutional investors seem to dominate the overall accruals management of portfolio firms. Therefore, the alleged managerial myopia induced by transient institutional investors, while

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<sup>112</sup> See Section 3.4 for more details.

observable may not as prevalent or severe as previously suggested (e.g., Levitt, 1998).

The finding that long-term oriented institutional ownership is associated with “reverse” myopic accruals management behaviour also highlights the asymmetric influence of long-term oriented institutional ownership on portfolio firms’ accruals management. In particular, although long-term oriented institutional ownership constrains portfolio firms’ discretionary accruals in general, it appears that such constraint is conservatively biased under certain circumstances. “Reverse” myopia is inconsistent with traditional long-term oriented institutional investor arguments. As such, this finding opens up an interesting research avenue to investigate further the reasons for the long-term oriented institutional investor conservative bias effect on portfolio firms’ accruals management.

## **7.6 *Limitations of the study***

As with all studies that use a modified Jones accruals model to proxy for discretionary accruals, this study inherits all the limitations of this estimation technique. This study uses the cross-sectional version of the modified Jones model which has been shown to be more powerful and better specified than its time-series counterpart to mitigate some of the criticisms on the model (Bartov, et al., 2000; Peasnell, et al., 2000). In addition, this study also attempts to control for most of the factors that may bias the results by controlling for extreme performances, and cash flows from operations; and by eliminating firms with discretionary accruals around zero. Given that the sub-samples of this study are partitioned based on discretionary

accruals, firms with discretionary accruals around zero are most likely to affect the empirical test results if the discretionary accruals of these firms are measured with error by the cross-sectional modified Jones model. After controlling for all these factors, the results of this study are qualitatively the same, thus suggesting the findings of this study are unlikely to be an artefact of measurement errors.

Another limitation of this study is that only one earnings target is examined by this study, namely the prior year earnings levels. Degeorge et al. (1999) find that firms have three main earnings targets to meet, namely (in order of importance), to avoid losses, to meet prior earnings levels and to meet analysts' forecasts. As a result, the findings of this study may not be generalisable to the whole population of firms in the economy. However, given that the sample firms are partitioned based on their *relative* non-discretionary earnings and earnings target positions, it is likely that the theoretical arguments of this study are also applicable to the other two earnings targets, except there may be variations in the strength of the association between institutional ownership type and accruals management.

The theories and interpretations of the empirical results of this study are framed in terms of institutional investors' influence on portfolio firm managers' earnings management decisions. A potential alternative explanation of the results relating to H1-H4 is that different types of institutional investors invest in firms based on firms' characteristics that are associated with discretionary accruals. As such, the levels of discretionary accruals may be one of the determinants of the levels of institutional ownership by transient and long-term oriented institutional investors. Given that no specific step has been taken to test the actual causal relations between institutional ownership type and discretionary accruals, this study cannot rule out this alternative

explanation to the results of H1-H4.<sup>113</sup> However, it may be conjectured that by replacing year-end institutional ownership with the third quarter institutional ownership (as per one of the robustness tests described in Section 6.5.2), there is some support for the hypothesised causal relations between institutional ownership types and discretionary accruals.

Another caveat is that this study's sample is drawn from a recent period (1995-1998) where there is a growth in transient institutional ownership as well as growth in the stock markets. Therefore, the results of this study may be specific to this period of time and not be generalisable to other time periods. Data constraints prevent investigating that potential in this thesis.

In relation to the tests for income smoothing, although income smoothing behaviour is tested among sample firms that, if such behaviour is found, can be unambiguously attributed to income smoothing incentives, the tests remain single period tests. Given that income smoothing is an inter-temporal (i.e., multiple period) earnings management strategy, (absence of) evidence regarding income smoothing may be an artefact of the tests used in this study.

## ***7.7 Future research avenues***

There are several future research avenues that may flow from this study. First, this study can be extended to examine the market reactions to portfolio firms that failed to meet their earnings targets. Several facets of this extension are possible. Future

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<sup>113</sup> The alternative causal relation would predict opposite associations to that hypothesised by H5-H8.



research can examine whether the stock market indeed punishes, and the extent to which the stock market punishes, specific firms that failed to meet or beat their earnings targets, especially if these firms have predominantly transient institutional ownership. Also, investigation can be carried out on the flow of transient institutional ownership away from firms that failed to meet their earnings targets to further triangulate the argument that transient institutional investors buy “winners” and sell “losers”.

The “reverse” myopia behaviour associated with long-term oriented institutional ownership is not well documented in the existing literature. Therefore, it represents a fertile ground for further research to examine, among other things, why such behaviour might have taken place, and whether such association (a) persists in other settings; (b) manifests in other forms; (c) has any resource allocation implications; and (d) has any (adverse) capital market reaction, regulatory reaction, or auditor reaction.

Future research can extend this study by examining three related issues on the associations between institutional ownership type and earnings management. First, the associations can be investigated using other earnings targets, such as analysts’ forecasts, management forecasts and loss avoidance. Next, the associations can be examined in the context of multiple earnings targets, taking into consideration the relative importance and levels of those targets. Finally, the associations between institutional investor type and earnings management, both in the context of single earnings target and multiple earnings targets, can be investigated using other earnings management tools such as accounting policy choices and real investment decisions (e.g., R&D expenditure).

Another extension may be along the line of El-Gazzar's (1998) investigation. For example, if long-term oriented institutional investors are indeed active investors, then this type of institutional investor may affect the level of predisclosure information differently from transient institutional investors.

Future research can also investigate the differential effects that different types of institutional investors have on portfolio firms' earnings management (both real investment and accounting choice) across two different periods. In particular, an inter-temporal comparison between the periods before (early to mid 1980s) and after (mid to late 1990s) institutional activism became popular would enable examinations of the inter-temporal changes in the role of institutional investors in the portfolio firms' corporate governance and how this change affects portfolio firms' earnings management. Other research avenues include examining the relation between institutional ownership type and earnings management (a) within specific industries, including finance related industries (Fields et al., 2001; Healy and Wahlen, 1999); (b) focusing on specific accrual items (Fields et al., 2001; Healy and Wahlen, 1999); and/or (c) among loss-making firms.

## **7.8 Conclusion**

This chapter summarises and concludes the thesis by reviewing the purpose and motivation of the study. It also summarises the major findings and implications. Limitations are discussed and future research avenues suggested.

The study provides evidence indicating that long-term oriented institutional investors constrain portfolio firms' accruals management. It also provides evidence that under certain circumstances they also associate with "reverse" myopic behaviour among portfolio firm managers. On the other hand, transient institutional investors appear to encourage managerial myopia although the results are more consistent for portfolio firms with predominantly transient institutional ownership, and these results are not very robust when the accounting flexibility of portfolio firm managers is considered.

The evidence of this study suggests that managerial myopia induced by transient institutional investors is not restricted to firms with R&D activities, or to real investment choice as an earnings management vehicle. However, the results also suggest that such managerial myopia may not be as prevalent as suggested by its critics.

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